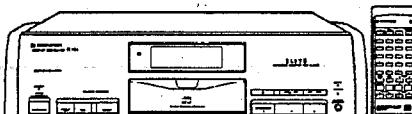


# Service Manual



• PD-54/KU

ORDER NO.  
ARP2730

## COMPACT DISC PLAYER

# PD-54 PD-S802 PD-S802-G

PD-54, PD-S802 AND PD-S802-G HAVE THE FOLLOWING :

Type	Model			Power Requirement	Remarks
	PD-54	PD-S802	PD-S802-G		
KU	○	-	-	AC120V only	
HB	-	○	-	AC220-230V, 230-240V (switchable) *	
HEM	-	○	○	AC220-230V, 230-240V (switchable) *	
HL	-	○	-	AC220-230V, 230-240V (switchable)	
SD	-	○	-	AC110V, 120-127V, 220V, 240V (switchable)	

\* Change the connection of the power transformer's primary wiring.

- This manual is applicable to the following : PD-54/KU; PD-S802/HB, HEM, HL and SD; PD-S802-G/HEM.
- For the following : PD-S802/HB, HEM, HL and SD; PD-S802-G/HEM, refer to page 40.

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# 1. SAFETY INFORMATION

This service manual is intended for qualified service technicians; it is not meant for the casual do-it-yourselfer. Qualified technicians have the necessary test equipment and tools, and have been trained to properly and safely repair complex products such as those covered by this manual. Improperly performed repairs can adversely affect the safety and reliability of the product and may void the warranty. If you are not qualified to perform the repair of this product properly and safely, you should not risk trying to do so and refer the repair to a qualified service technician.

## WARNING

Lead in solder used in this product is listed by the California Health and Welfare agency as a known reproductive toxicant which may cause birth defects or other reproductive harm (California Health & Safety Code, Section 25249.5).

When servicing or handling circuit boards and other components which contain lead in solder, avoid unprotected skin contact with the solder. Also, when soldering do not inhale any smoke or fumes produced.

## NOTICE

### (FOR CANADIAN MODEL ONLY)

Fuse symbols  (fast operating fuse) and/or  (slow operating fuse) on PCB indicate that replacement parts must be of identical designation.

## REMARQUE

### (POUR MODÈLE CANADIEN SEULEMENT)

Les symboles de fusible  (fusible de type rapide) et/ou  (fusible de type lent) sur CCI indiquent que les pièces de remplacement doivent avoir la même désignation.

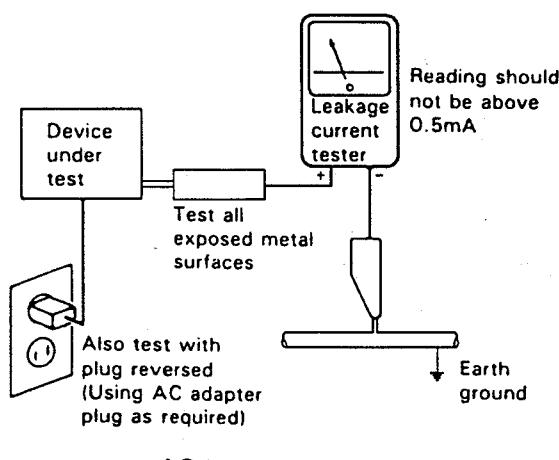
## (FOR USA MODEL ONLY)

### 1. SAFETY PRECAUTIONS

The following check should be performed for the continued protection of the customer and service technician.

#### LEAKAGE CURRENT CHECK

Measure leakage current to a known earth ground (water pipe, conduit, etc.) by connecting a leakage current tester such as Simpson Model 229-2 or equivalent between the earth ground and all exposed metal parts of the appliance (input/output terminals, screwheads, metal overlays, control shaft, etc.). Plug the AC line cord of the appliance directly into a 120V AC 60Hz outlet and turn the AC power switch on. Any current measured must not exceed 0.5mA.



ANY MEASUREMENTS NOT WITHIN THE LIMITS OUTLINED ABOVE ARE INDICATIVE OF A POTENTIAL SHOCK HAZARD AND MUST BE CORRECTED BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

### 2. PRODUCT SAFETY NOTICE

Many electrical and mechanical parts in the appliance have special safety related characteristics. These are often not evident from visual inspection nor the protection afforded by them necessarily can be obtained by using replacement components rated for voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in this Service Manual.

Electrical components having such features are identified by marking with a  $\Delta$  on the schematics and on the parts list in this Service Manual.

The use of a substitute replacement component which does not have the same safety characteristics as the PIONEER recommended replacement one, shown in the parts list in this Service Manual, may create shock, fire, or other hazards.

Product Safety is continuously under review and new instructions are issued from time to time. For the latest information, always consult the current PIONEER Service Manual. A subscription to, or additional copies of, PIONEER Service Manual may be obtained at a nominal charge from PIONEER.

## (FOR EUROPEAN MODEL ONLY)

## VARO!

AVATTAESSA JA SUOJALUKITUS  
OHITETTAESSA OLET ALTTIINA  
NÄKYMÄTTÖMÄLLE LASERSÄTEILYLLÉ.  
ÄLÄ KATSO SÄTEESEEN.



LASER  
Kuva 1  
Lasersäteilyn  
varoitusmerkki

## WARNING!

DEVICE INCLUDES LASER DIODE WHICH  
EMITS INVISIBLE INFRARED RADIATION  
WHICH IS DANGEROUS TO EYES. THERE IS  
A WARNING SIGN ACCORDING TO PICTURE  
1 INSIDE THE DEVICE CLOSE TO THE LASER  
DIODE.



LASER  
Picture 1  
Warning sign for  
laser radiation

## ADVERSEL:

USYNLIG LASERSTRÅLING VED ÅBNING  
NÄR SIKKERHEDSAFTRYDERE ER UDE AF  
FUNKTION UNDGÅ UDSAETTELSE FOR  
STRÅLING.

## WARNING!

OSYNLIG LASERSTRÅLING NÄR DENNA  
DEL ÄR ÖPPNAD OCH SPÄRREN  
ÄR URKOPPLAD. BETRAKTA EJ STRÅLEN.

## IMPORTANT

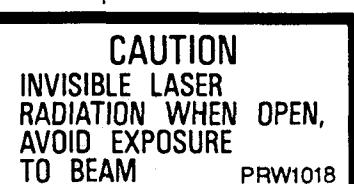
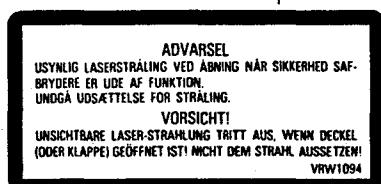
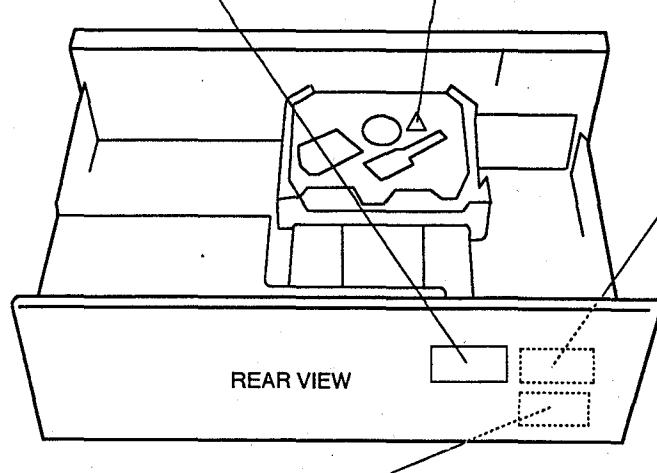
THIS PIONEER APPARATUS CONTAINS  
LASER OF CLASS 1.  
SERVICING OPERATION OF THE APPARATUS  
SHOULD BE DONE BY A SPECIALLY  
INSTRUCTED PERSON.

## LASER DIODE CHARACTERISTICS

MAXIMUM OUTPUT POWER: 5 mw  
WAVELENGTH: 780-785 nm

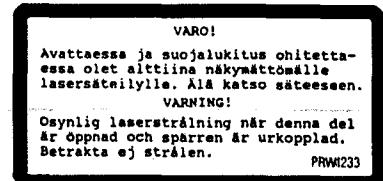
## LABEL CHECK

## HB and HEM types



## HEM type

## HEM type



## Additional Laser Caution

1. **Laser Interlock Mechanism**  
The position of the switch (S601) for detecting loading completion is detected by the system microprocessor, and the design prevents laser diode oscillation when the switch (S601) is not CLMP terminal side (when CLMP signal is OFF, that is, high level). Thus, the interlock will no longer function if the switch (S601) is deliberately set to CLMP terminal side (if CLMP signal is low level). In the test mode \*, the interlock mechanism will not function. Laser diode oscillation will continue, if pin 1 of M51593FP ( IC101 ) on the preamplifier board loaded on pickup assembly are connected to GND, or pin 19 is connected to low level ( ON ), or else the terminals of Q101 are shorted to each other ( fault condition ).
2. When the cover is opened with the servo mechanism block removed to be turned over, close viewing of the objective lens with the naked eye will cause exposure to a Class 1 laser beam.

\* : Refer to page 32.

## 2. EXPLODED VIEWS, PACKING AND PARTS LIST

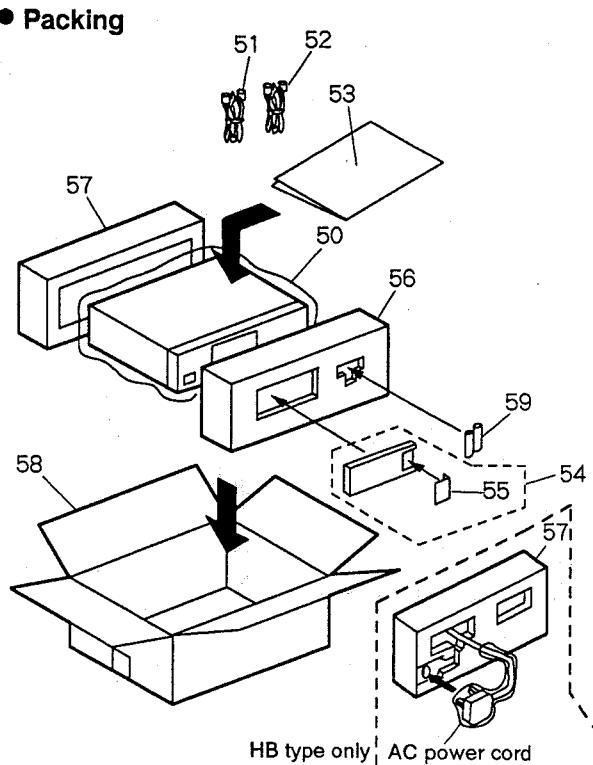
### NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

### 2.1 EXTERIOR SECTION AND PACKING

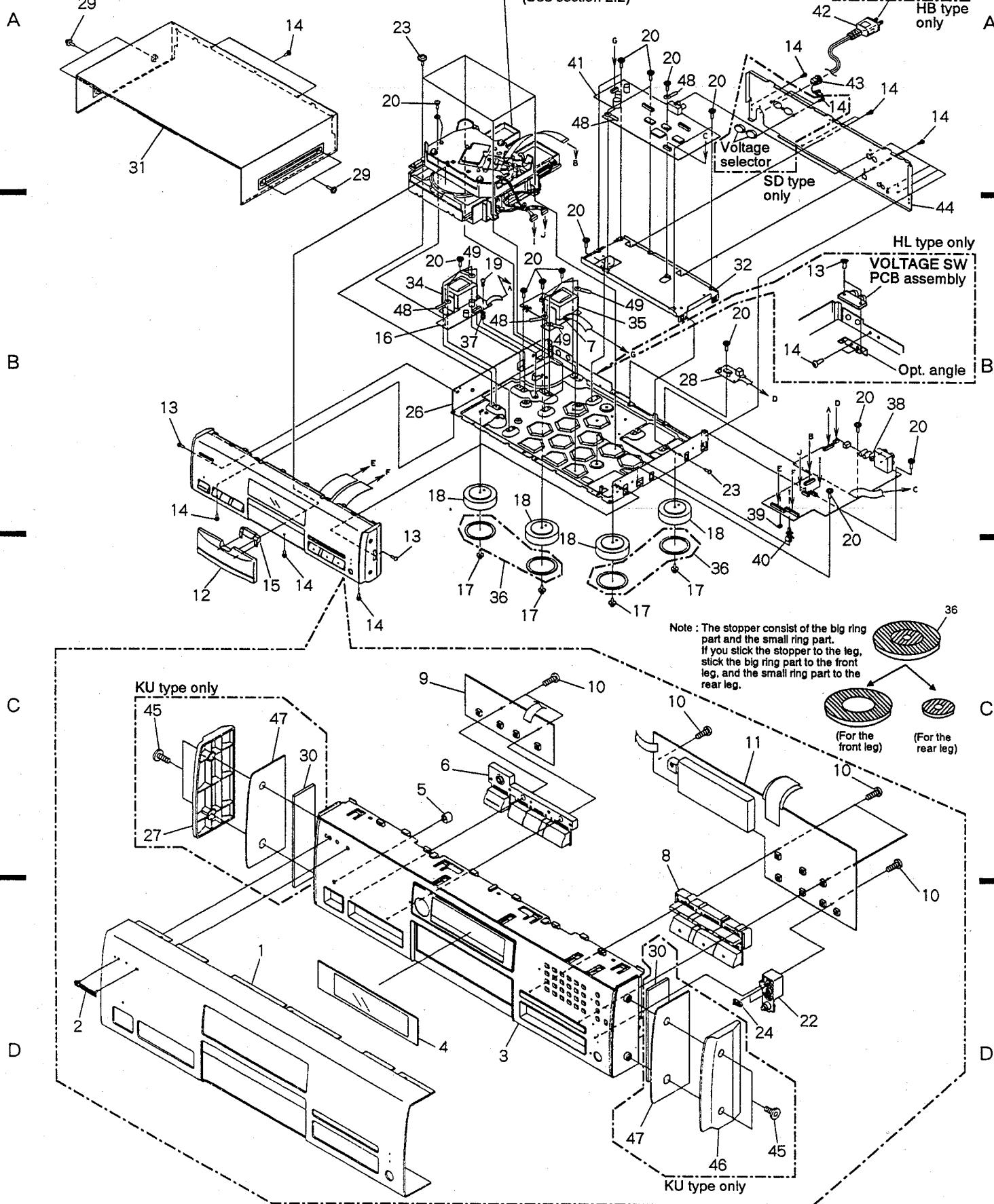
#### Parts List

Mark	No.	Description	Part No.	Mark	No.	Description	Part No.		
NSP	1	Front panel 54	PAN1286	NSP	42	AC power cord	PDG1015		
	2	Name plate	RAN1008		43	Cord stopper	CM-22C		
	3	Function panel 54	PNW2332		44	Rear base 54	PNA2015		
	4	Display window	PAM1622		45	Screw	PBA1071		
	5	LED lens	PNW2019		46	Panel stabilizer R	PNW2306		
	6	Power button 78	PAC1743	NSP	47	Side spacer	PEB1247		
	7	AUDIO TRANS. PCB assembly	PWZ2545		48	Cord holder	DNF1128		
	8	Function button 78	PAC1744		49	Cord clamper	RNH-184		
	9	SW PCB assembly	PWZ2543		50	Mirror mat sheet	Z23-007		
	10	Screw	PPZ30P150FMC		51	Cord with mini plug	PDE-319		
NSP	11	FUNCTION PCB assembly	PWZ2542	NSP	52	Cord with plug	PDE1001		
	12	Tray panel	PNW2280		53	Operating instructions (English)	PRB1196		
	13	Screw	IBZ30P060FCC		54	Remote control unit	PWW1072		
	14	Screw	BBT30P080FCC		55	Battery cover	PZN1001		
	15	Tray lens	PNW2242		56	Protector F	PHA1251		
	16	SERVO TRANS. PCB assembly	PWZ2546		57	Protector R	PHA1245		
	17	Screw	IBZ30P080FCC		58	CD packing case 54	PHG1956		
	18	Insulator	PNW2020		59	Battery (R03, AAA)	VEM-022		
NSP	19	Screw	IBZ30P150FCC	● Packing					
	20	Screw	IBZ30P060FCC	● Packing					
NSP	21	Loading mechanism assembly TT	PXA1521	● Packing					
	22	Output button	PAC1661	● Packing					
NSP	23	Screw	BBZ30P080FCC	● Packing					
	24	Indicator lens	PEA1206	● Packing					
	25	Screw	PDZ30P050FCC	● Packing					
	26	Under base	PNA1973	● Packing					
NSP	27	Panel stabilizer L	PNW2281	● Packing					
	28	COAXIAL OUTPUT PCB assembly	PWZ2502	● Packing					
	29	Screw	FBT40P080FZK	● Packing					
	30	Side sheet	PNM1226	● Packing					
NSP	31	Bonnet	PYY1148	● Packing					
	32	Audio angle	PNA1968	● Packing					
	33	• • • •		● Packing					
	34	Power transformer (AC120V)	PTT1269	● Packing					
NSP	35	Power transformer (AC120V)	PTT1270	● Packing					
	36	Stopper	PNM1134	● Packing					
NSP	37	PCB spacer	PNY-404	● Packing					
NSP	38	MAIN PCB assembly	PWZ2500	● Packing					
NSP	39	Cushion (3.5)	PEB1110	● Packing					
NSP	40	PCB holder	PNW2100	● Packing					
NSP	41	AUDIO PCB assembly	PWZ2544	● Packing					



## ● Exterior Section

NOTE: Screws adjacent to ▼ mark on the product are used for disassembly.



## 2.2 LOADING MECHANISM ASSEMBLY TT

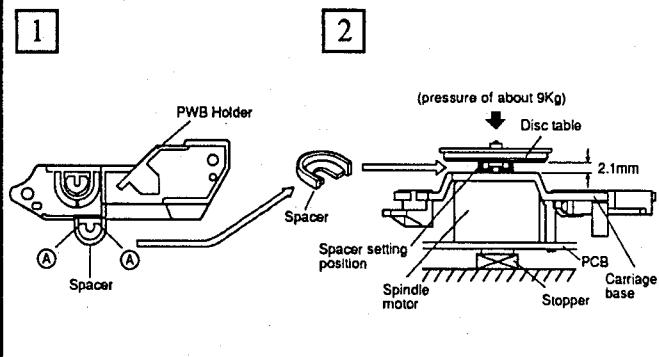
### Parts List

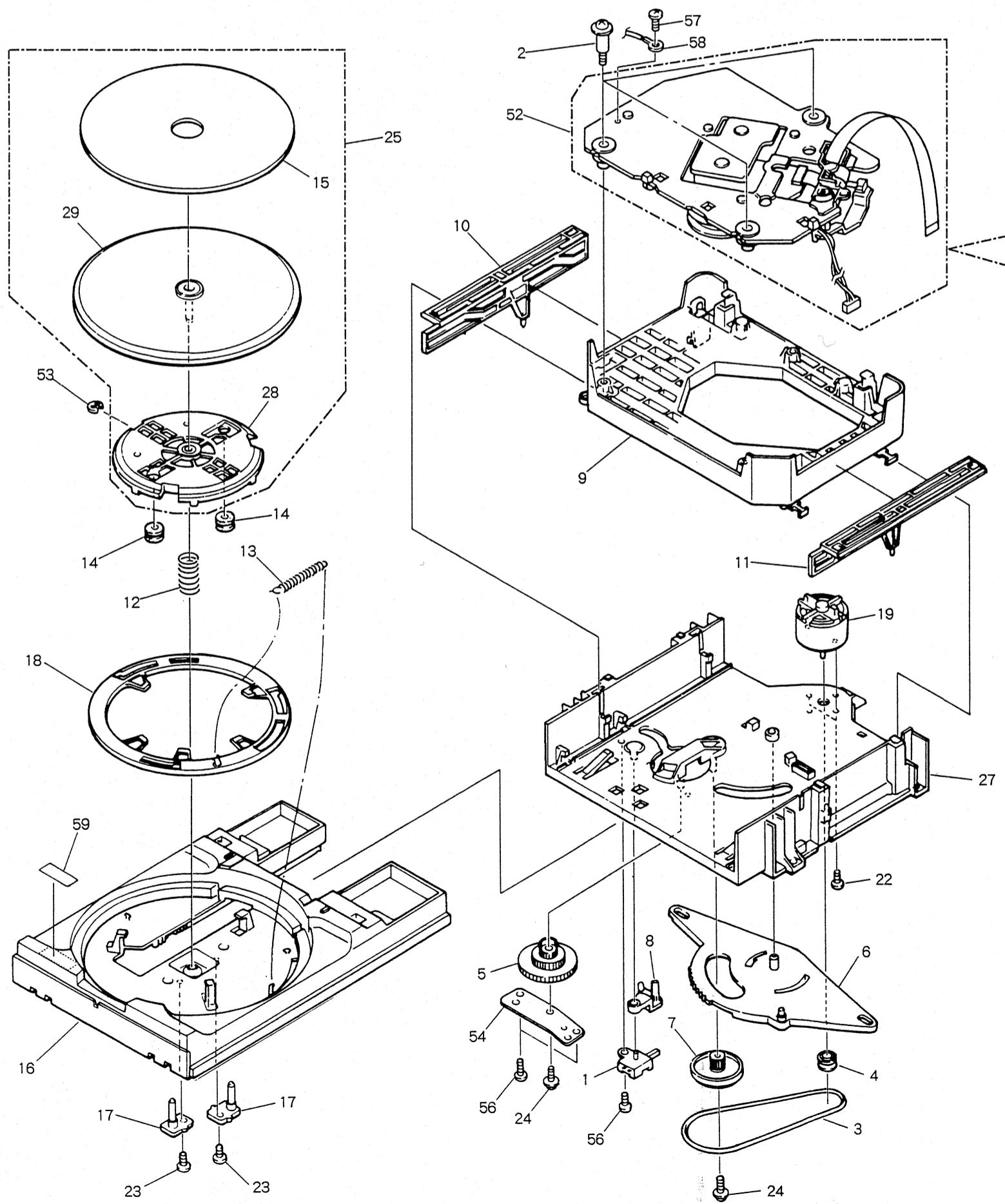
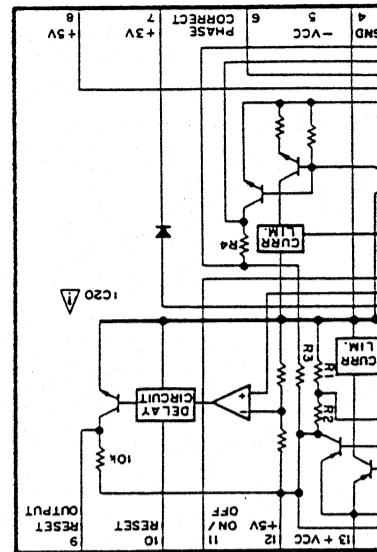
Mark	No.	Description	Part No.	Mark	No.	Description	Part No.
	1	Lever switch (S601)	DSK1003		49	• • • •	
	2	Float screw	PBA1027	NSP	50	Mechanism board assembly	PWX1192
	3	Rubber belt	PEB1186	NSP	51	Binder	PEC-107
	4	Motor pulley	PNW1634	NSP	52	Servo mechanism assembly TT92	PXA1479
	5	Drive gear	PNW1996				
	6	Synchronized lever	PNW2168		53	Stop ring	YE20S
	7	Gear pulley	PNW1998		54	Shaft holder	PNB1382
	8	SW head	PNW1999		55	• • • •	
	9	Float base	PNW2000		56	Screw	BPZ26P060FMC
	10	Left cam	PNW2001		57	Screw	BBZ26P060FMC
	11	Right cam	PNW2002		58	Earth lead	PDF1148
	12	Float spring	PBH1120		59	Caution label	PRW1244
	13	Lock spring	PBH1121				
	14	Float rubber	PEB1014				
	15	Table rubber sheet	PEB1181				
	16	Tray	PNW2003				
	17	Table guide	PNW2004				
	18	Lock plate	PNW2005				
	19	D.C. motor (0.75W, LOADING)	PXM1010				
	20	Float rubber	PEB1031				
	21	Float rubber	PEB1170				
	22	Screw	BMZ26P040FMC				
	23	Screw	IPZ26P060FCU				
	24	Screw	IPZ20P080FMC				
	25	Turn table assembly	PEA1165				
	26	• • • •					
NSP	27	Loading base	PNW1995				
NSP	28	Table shaft holder	PXA1383				
NSP	29	Turn table (AL)	PNR1035				
	30	Carriage D.C. motor (0.3W)	PXM1027				
	31	Pinion gear	PNW2055				
	32	D.C. motor assembly (SPINDLE, with oil)	PEA1236				
	33	Carriage base	PNW2058				
	34	Disc table	PNW1067				
	35	Screw	JFZ20P030FNI				
	36	Screw	JFZ17P025FZK				
	37	Gear 3	PNW2054				
	38	Gear 2	PNW2053				
	39	Washer	WT12D032D025				
	40	Pickup assembly	PEA1179				
	41	Guide bar	PLA1094				
	42	Gear 1	PNW2052				
NSP	43	Gear stopper	PNB1303				
	44	Screw	BPZ20P060FMC				
	45	Earth spring	PBH1132				
NSP	46	Mechanism base TT	PNB1431				
	47	Screw	BPZ26P100FMC				
	48	PWB holder	PNW2057				

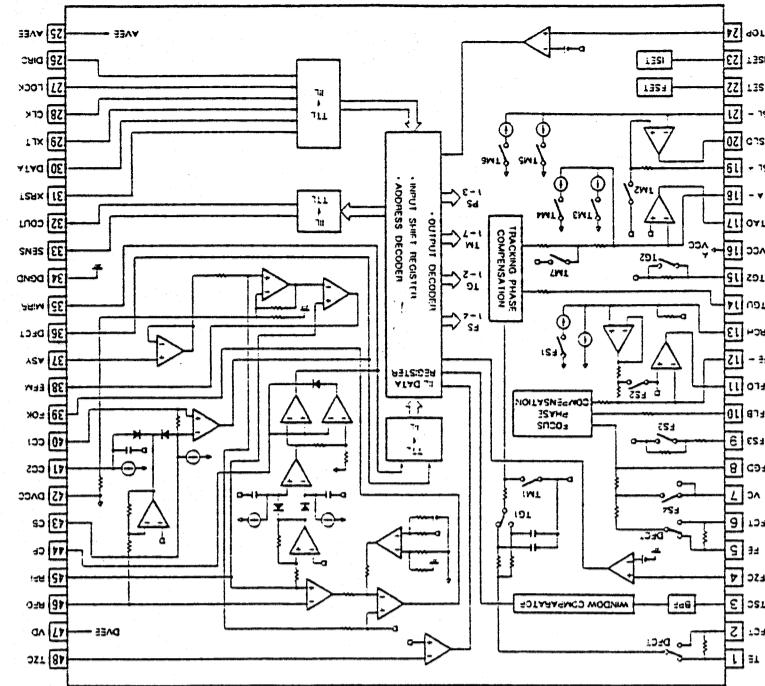
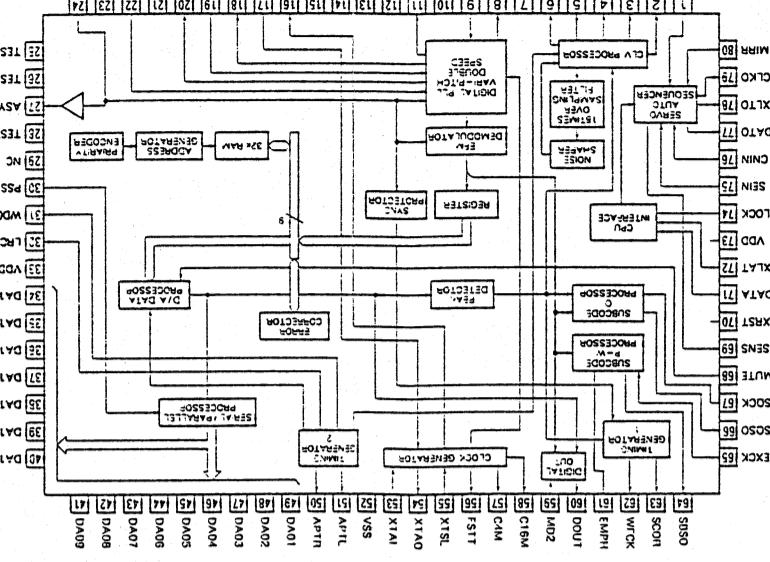
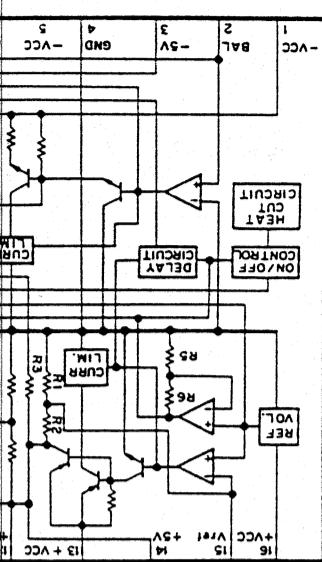
#### • How to install the disc table

[1] Use nippers or other tool to cut the two sections marked (A) in figure [1]. Then remove the spacer.

[2] While supporting the spindle motor shaft with the stopper, put the spacer on top of the carriage base and stick the disc table on top (takes about 9Kg pressure). Take off the spacer.





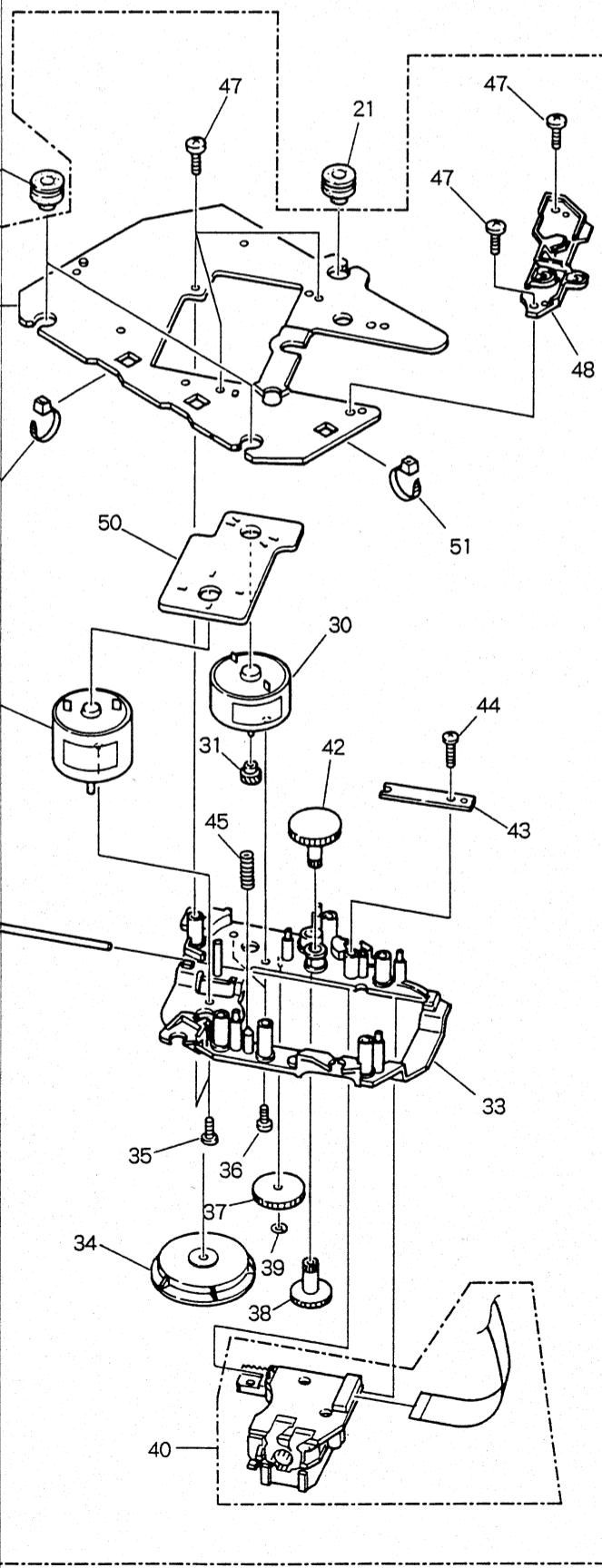


### • IC BLOCK DIAGRAMS

## 3. DISASSEMBLY

### 3.1 REMOVE THE TRAY PANEL AND THE TRAY LENS

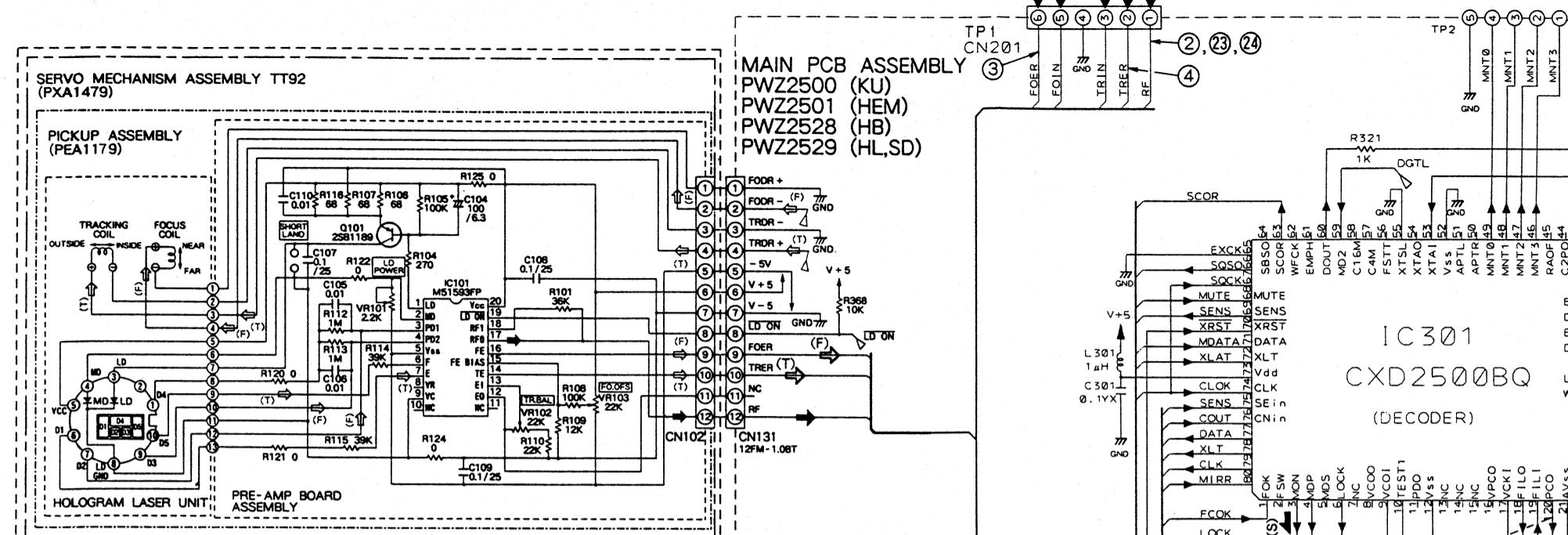
Hold the tray panel with your hands as shown in Fig. 1, and grasp the tray with your thumbs and then lift the tray panel up while pulling it toward you with the other fingers. (Fig. 2)



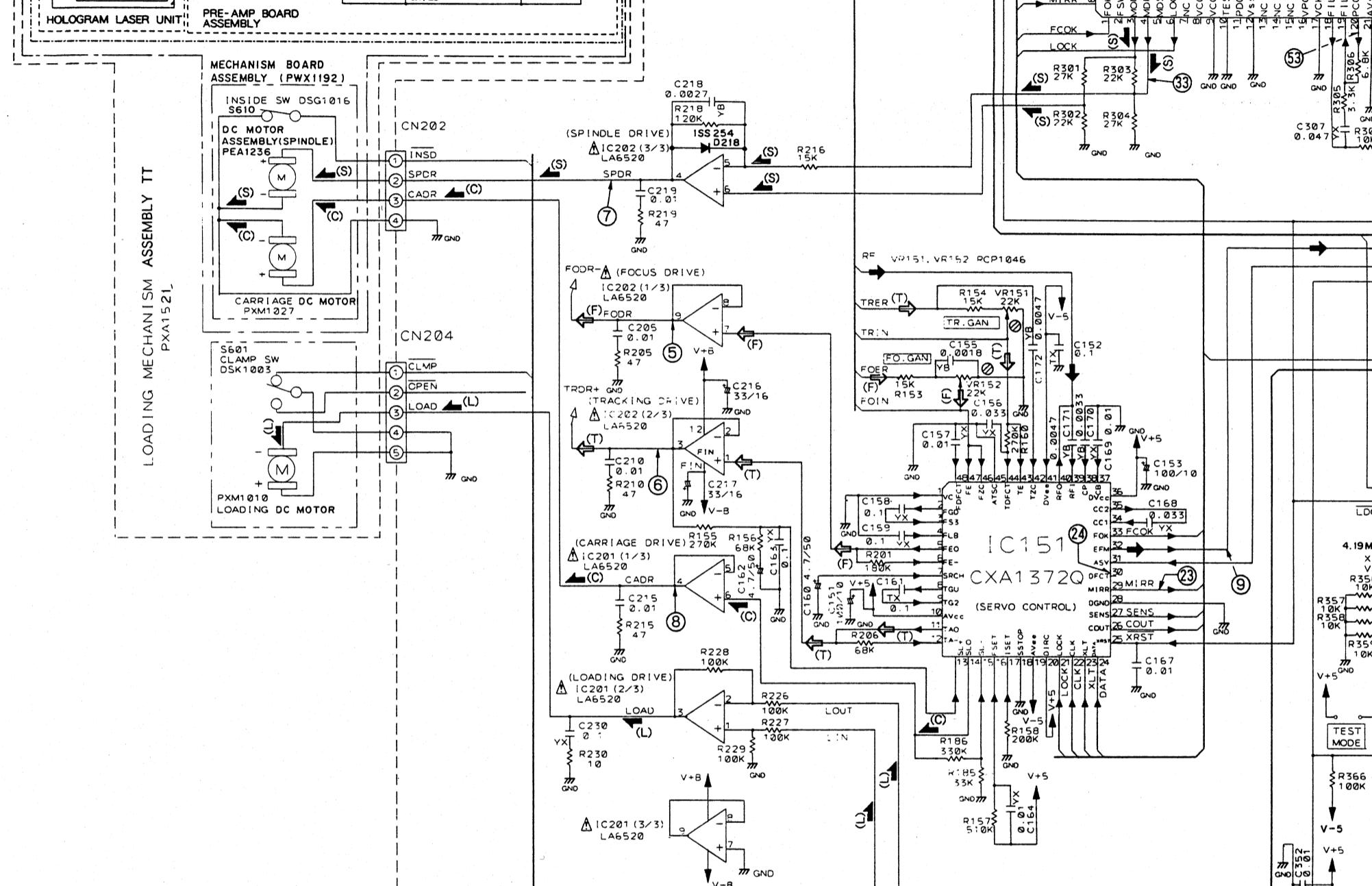
## 4. SCHEMATIC AND PCB CONNECTION DIAGRAMS

4.1 MAIN, COAXIAL OUTPUT, AUDIO TRANS., SERVO TRANS., FUNCTION, SW AND MECHANISM BOARD AND PICKUP ASSEMBLIES

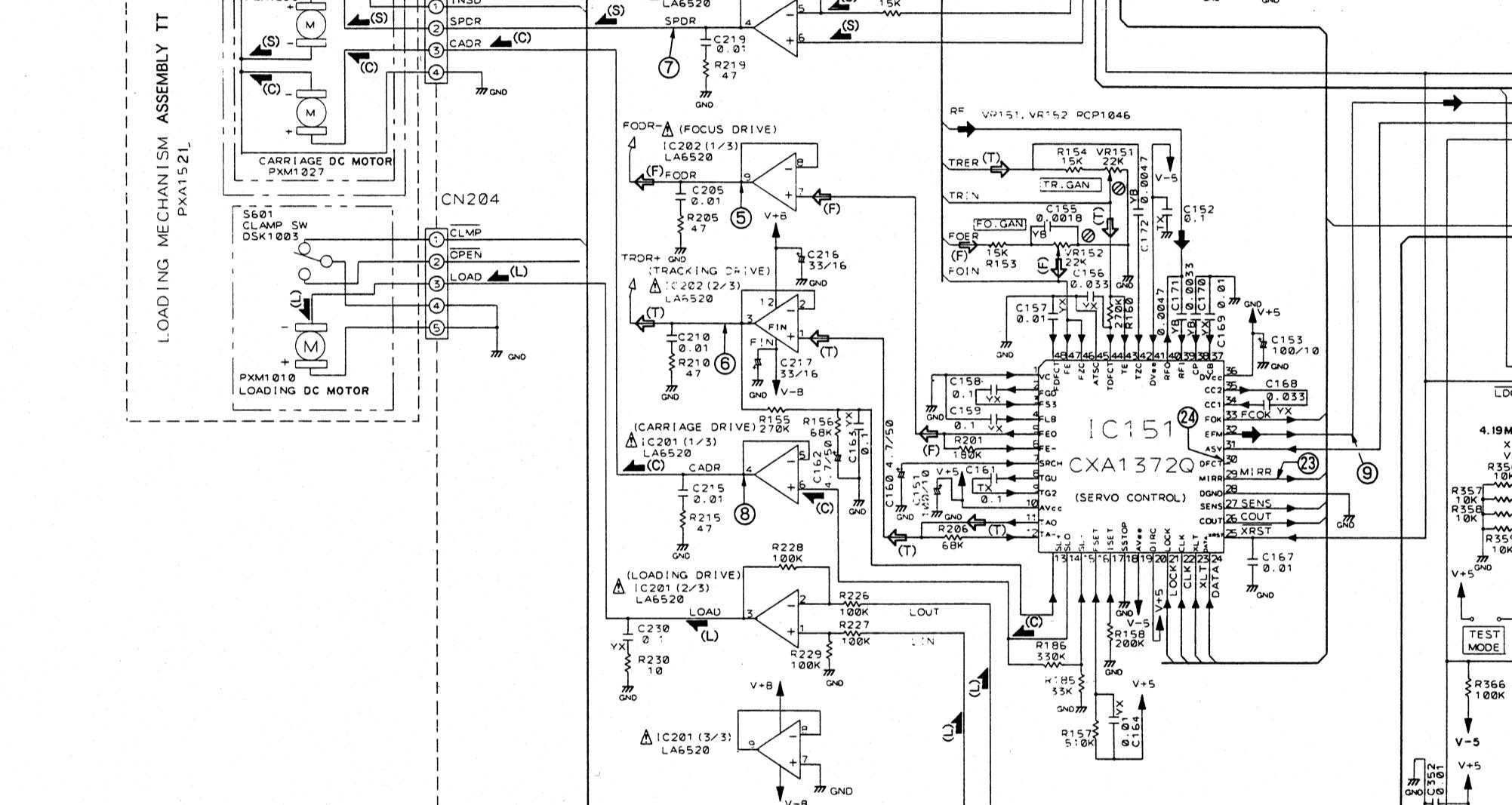
A



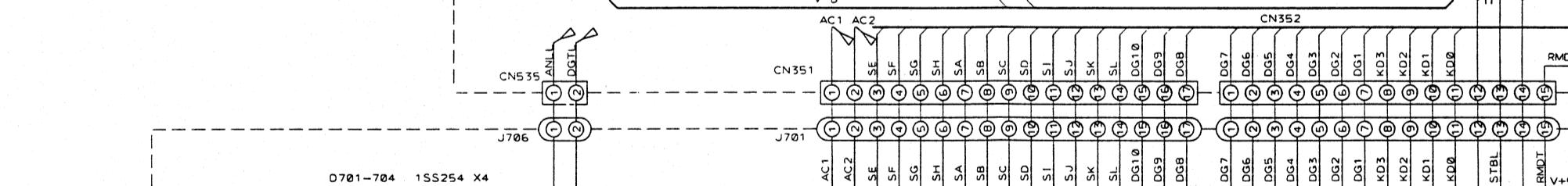
B



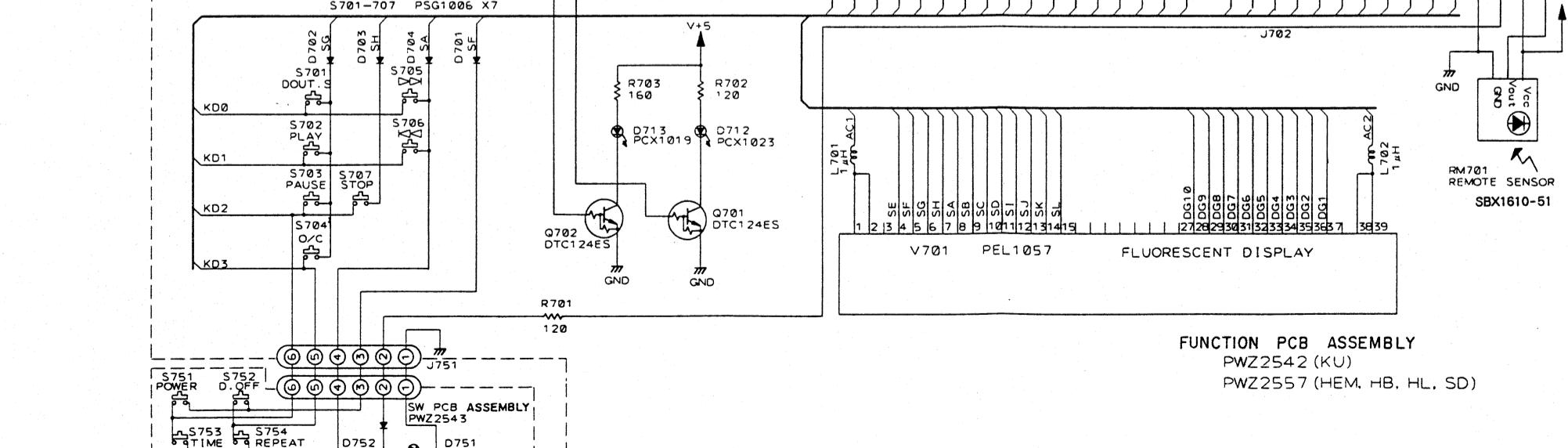
C



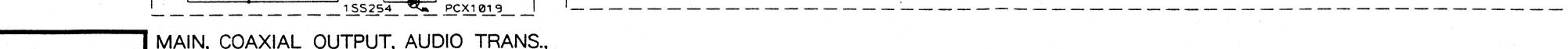
D



E

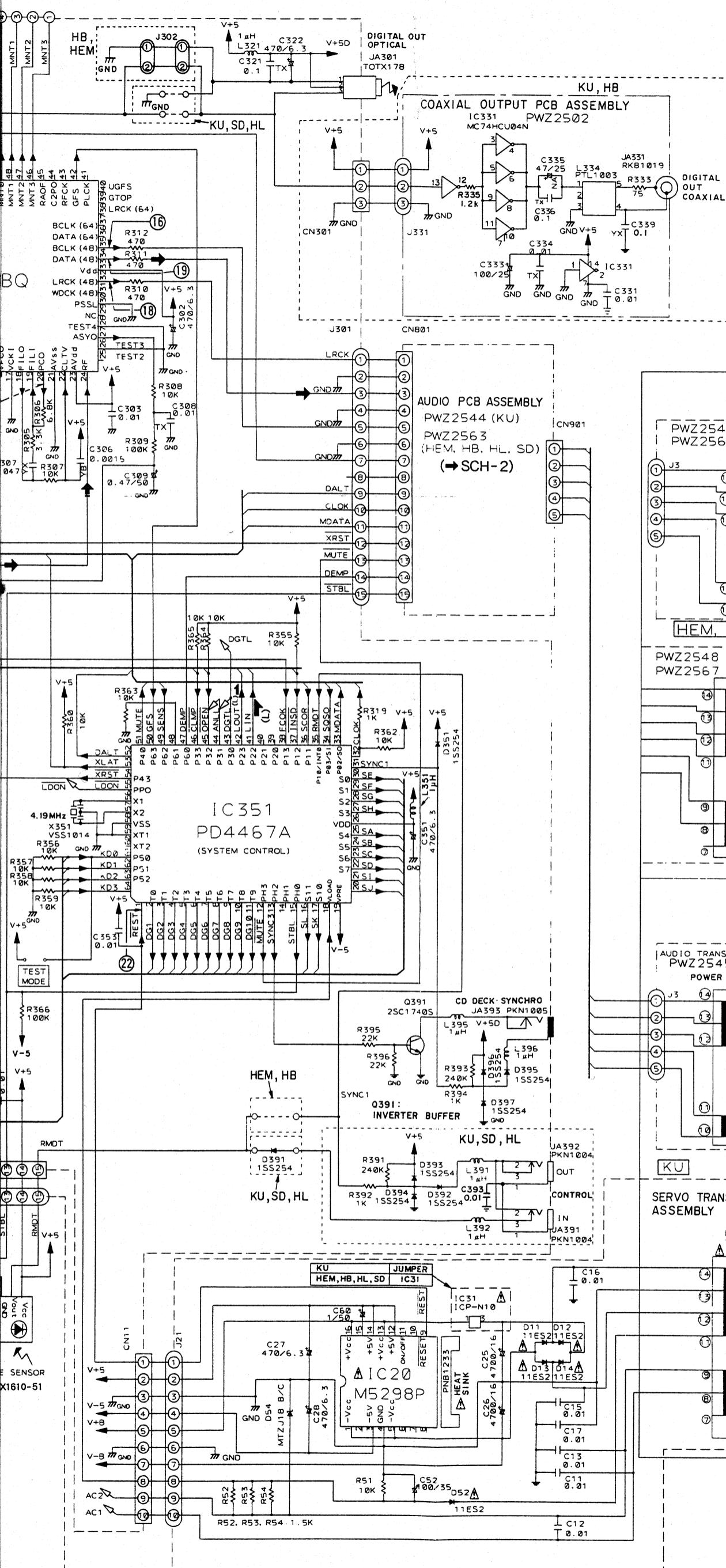


F



SCH-1

MAIN, COAXIAL OUTPUT, AUDIO TRANS., SERVO TRANS., FUNCTION, SW AND VOLTAGE SW PCB ASSEMBLIES, AND MECHANISM BOARD AND PICKUP ASSEMBLIES

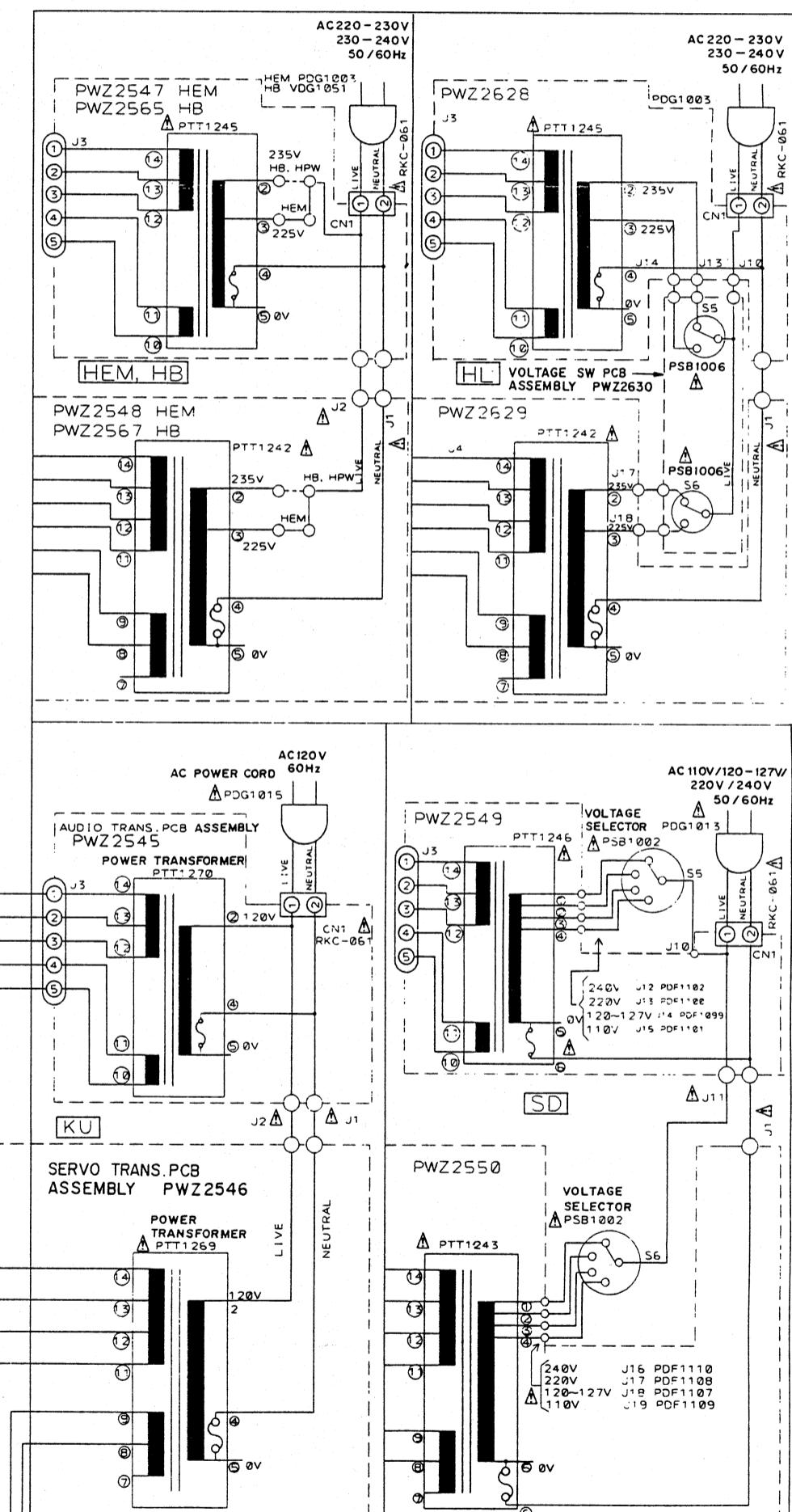


SCH-1

- : Signal Route
- (F) → : Focus Servo Loop Line
- (T) → : Tracking Servo Loop Line
- (L) : Loading Motor Route
- (S) : Spindle Motor Route
- (C) : Carriage Motor Route
- : Measurement Point

## Note

TYPE	MODEL		
	PD-54	PD-S802	PD-S802-G
KU	○	—	—
HB	—	○	—
HEM	—	○	○
HL	—	○	—
SD	—	○	—



MAIN, COAXIAL OUTPUT, AUDIO TRANS.,  
SERVO TRANS., FUNCTION, SW  
AND VOLTAGE SW PCB ASSEMBLIES,  
AND MECHANISM BOARD AND PICKUP ASSEMBLIES

SCH-1

## MAIN PCB ASSEMBLY

IC301  
(CXD2500BQ)

Pin No.	Voltage(V)	Pin No.	Voltage(V)
1	5	41	2.5
2	2.1	42	5
3	5	43	2.5
4	2.6	44	0
5	2.2	45	5
6	5	46	4.4
7	0	47	0
8	5	48	0
9	0	49	0 to 0.3
10	0	50	1.2
11	2.1	51	1.2
12	0	52	0
13	1	53	2.5
14	0.9 to 1.3	54	2.5
15	0	55	0
16	2	56	2.9
17	0	57	2.5
18	2.5	58	2.5
19	2.4	59	5
20	2.4	60	2.5
21	0	61	0
22	2.5	62	2.5
23	5	63	0
24	2.5	64	0
25	0.2	65	0
26	0	66	3.3 to 4.6
27	2.5	67	5
28	0	68	0
29	0	69	2.1 to 3
30	0	70	5
31	1.3 to 2.2	71	0
32	2.5	72	5
33	5	73	5
34	2.5	74	5
35	2.5	75	5
36	2.5	76	0
37	2.5	77	5
38	2.5	78	5
39	0	79	5
40	5	80	0

IC351  
(PD4467A)

Pin No.	Voltage(V)	Pin No.	Voltage(V)
1	5.1	33	4.9
2	-22.5 to -23.5	34	3.5 to 4.5
3	-22.5 to -23.5	35	5
4	-22.5 to -23.5	36	0.1
5	-22.5 to -23.5	37	5
6	-22.5 to -23.5	38	5
7	-22.5 to -23.5	39	0
8	-22.5 to -23.5	40	0
9	-22.5 to -23.5	41	0
10	-22.5 to -23.5	42	0
11	-22.5 to -23.5	43	4.9
12	5	44	4.9
13	5	45	5
14	N. C. (2.6)	46	0
15	-0.9	47	4.9
16	14.3 to 14.8	48	0
17	11.3 to 11.8	49	0.1
18	-26.3	50	5.1
19	-4.9	51	0
20	-7.8 to -8.1	52	5
21	-5.9 to -6.5	53	5
22	-8.3 to -11	54	5
23	-5.2 to -5.5	55	5
24	-3 to -6	56	2.3
25	-5.5 to -8.5	57	2.4
26	5	58	0
27	-19.4 to -19.7	59	0
28	-19.4 to -19.7	60	N. C.
29	-14 to -17	61	0
30	-11 to -14	62	0
31	4.9	63	0
32	4.9	64	0

IC201  
(LA6520)

Pin No.	Voltage(V)
1	0
2	0
3	0
4	0.1 to 0.8
5	0.1 to 0.8
6	0.1 to 0.8
7	0
8	0
9	0
10	N. C.
11	N. C.
12	8.9

IC202  
(LA6520)

Pin No.	Voltage(V)
1	0.1
2	0.1
3	0.1
4	-0.7 to -1
5	2.3
6	2.3
7	-0.1
8	-0.1
9	-0.1
10	N. C.
11	N. C.
12	8.9

## For SCHEMATIC DIAGRAM

Note: (Type 4)  
 1. When ordering service parts, be sure to refer to "PARTS LIST of EXPLODED VIEWS" or "PCB PARTS LIST".

2. Since these are basic circuits, some parts of them or the values of some components may be changed for improvement.

## 3. RESISTORS:

Unit:  $k\Omega$ ,  $M\Omega$ , or  $\Omega$  unless otherwise noted.  
 Rated power: 1/4W, 1/6W, 1/8W, 1/10W unless otherwise noted.  
 Tolerance: (F):  $\pm 1\%$ , (G):  $\pm 2\%$ , (K):  $\pm 10\%$ , (M):  $\pm 20\%$  or  $\pm 5\%$  unless otherwise noted.

## 4. CAPACITORS:

Unit:  $pF$  or  $\mu F$  unless otherwise noted.  
 Ratings: capacitor ( $\mu F$ ) / voltage (V) unless otherwise noted.  
 Rated voltage: 50V except for electrolytic capacitors.

## 5. COILS:

Unit:  $mH$  or  $\mu H$  unless otherwise noted.

## 6. VOLTAGE AND CURRENT:

$\square$ : DC voltage (V) in PLAY mode unless otherwise noted.  
 $\leftarrow mA$  or  $\leftarrow mA$ : DC current in PLAY mode unless otherwise noted.  
 Value in ( ) is DC current in STOP mode.

## 7. OTHERS:

- $\rightarrow$ : Signal route.
- $\odot$ : Adjusting point.
- $\nabla$  (Red): Measurement point.
- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the parts. Therefore, when replacing, be sure to use parts of identical designation.

## 8. SWITCHES (Underline indicates switch position):

## OUT OF P.C.B. BOARD ASSEMBLY

S601: CLAMP

## MECHANISM BOARD ASSEMBLY

S610: INSIDE

## FUNCTION PCB ASSEMBLY

S701: OUTPUT SELECTOR

S702: PLAY (▶)

S703: PAUSE (■)

S704: OPEN/CLOSE (▲)

S705: TRACK/MANUAL SEARCH (▶▶▶▶)

S706: TRACK/MANUAL SEARCH (◀◀◀◀)

S707: STOP (■)

## SW PCB ASSEMBLY

S751: POWER STANDBY ON/OFF

S752: DISPLAY ON/OFF

S753: TIME

S754: REPEAT

## 9. For SCH-□ on the schematic diagram

• SCH-□ indicates the drawing number of the schematic diagram.  
 (SCH stands for schematic diagram.)

## For PCB CONNECTION DIAGRAMS

P.C.B. pattern diagram indication	Corresponding part symbol	Part name
		Transistor
		FET
		Diode
		Zener diode
		LED
		Varactor
		Tact switch
		Inductor
		Coil
		Transformer
		Filter
		Ceramic capacitor
		Mylar capacitor
		Styrol capacitor
		Electrolytic capacitor (Non polarized)
		Electrolytic capacitor (Noiseless)
		Electrolytic capacitor (Polarized)
		Electrolytic capacitor (Polarized)
		Power capacitor
		Semi-fixed resistor
		Resistor array
		Resistor
		Resonator
		Thermistor

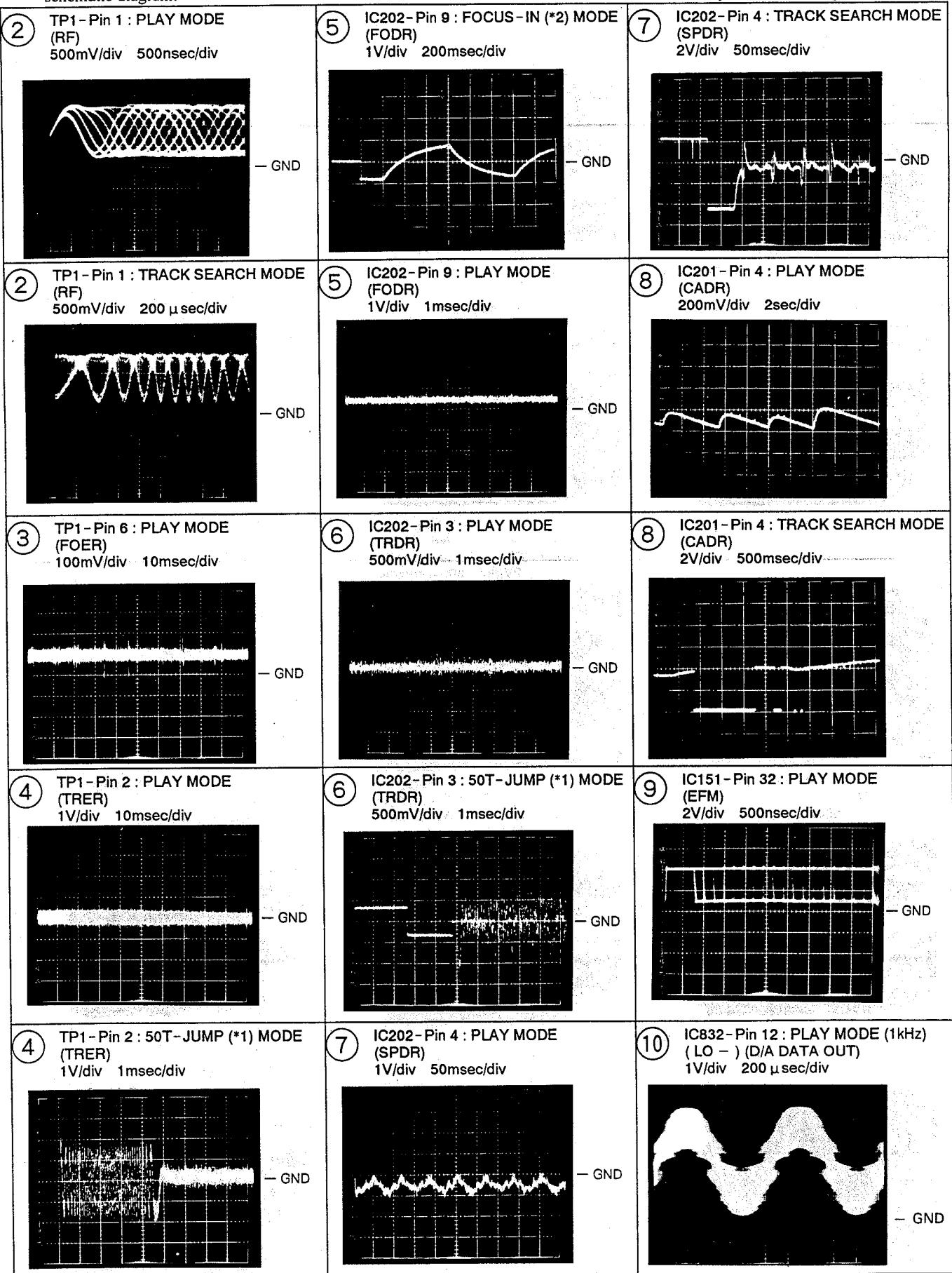
- This P.C.B. connection diagram is viewed from the parts mounted side.
- The parts which have been mounted on the board can be replaced with those shown with the corresponding wiring symbols listed in the above Table.
- The capacitor terminal marked with  $\square$  shows negative terminal.
- The diode marked with  $\odot$  shows cathode side.
- The transistor terminal marked with  $\square$  shows emitter.

## WAVEFORMS

Note: The encircled numbers denote measuring points in the schematic diagram.

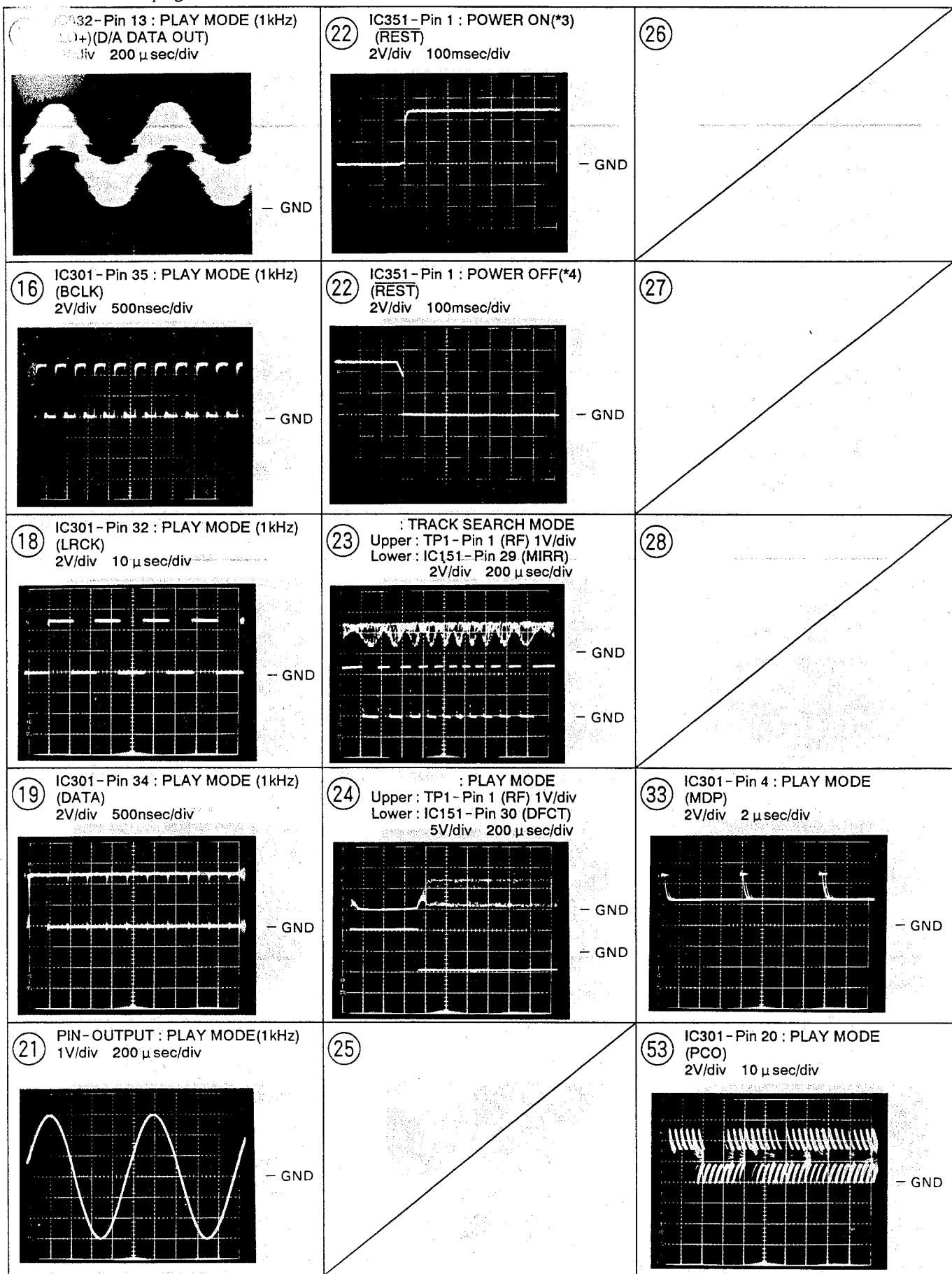
\*1 50T-JUMP: After switching to the pause mode, press the manual search key.

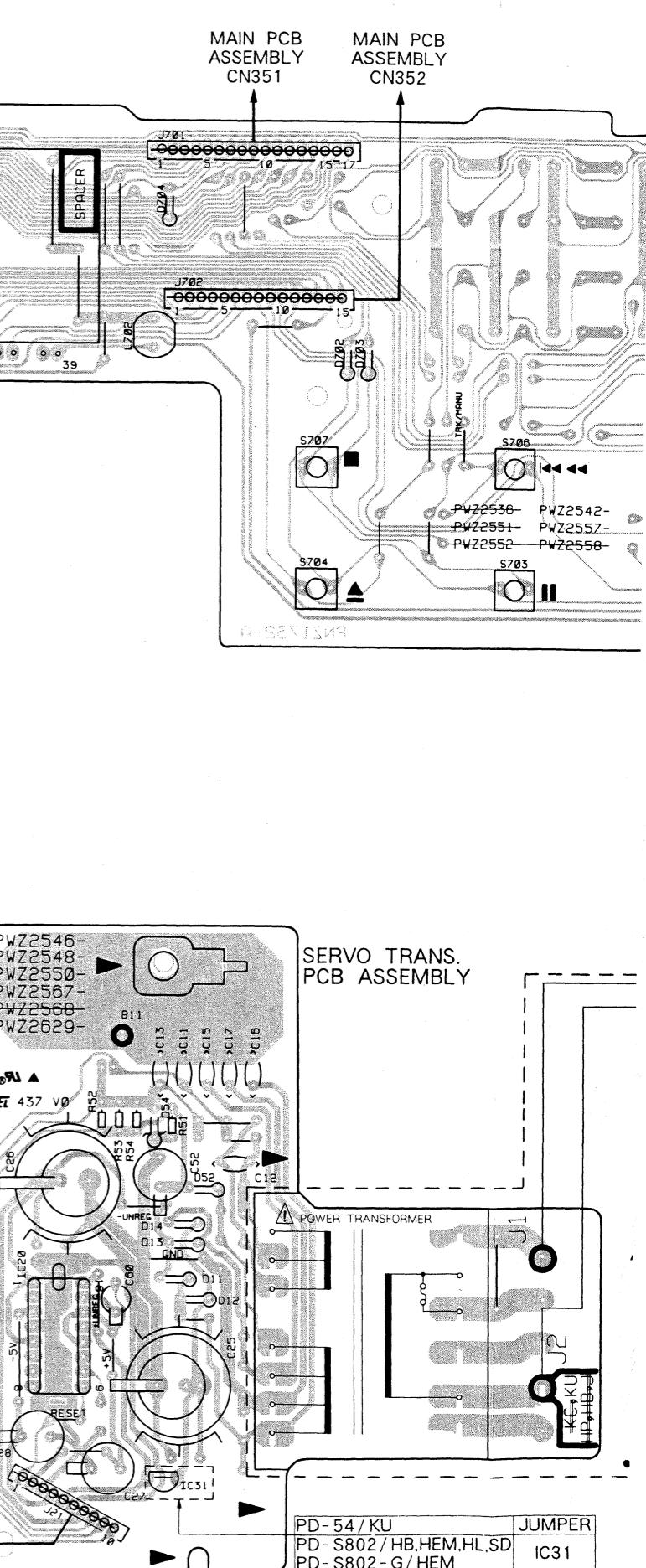
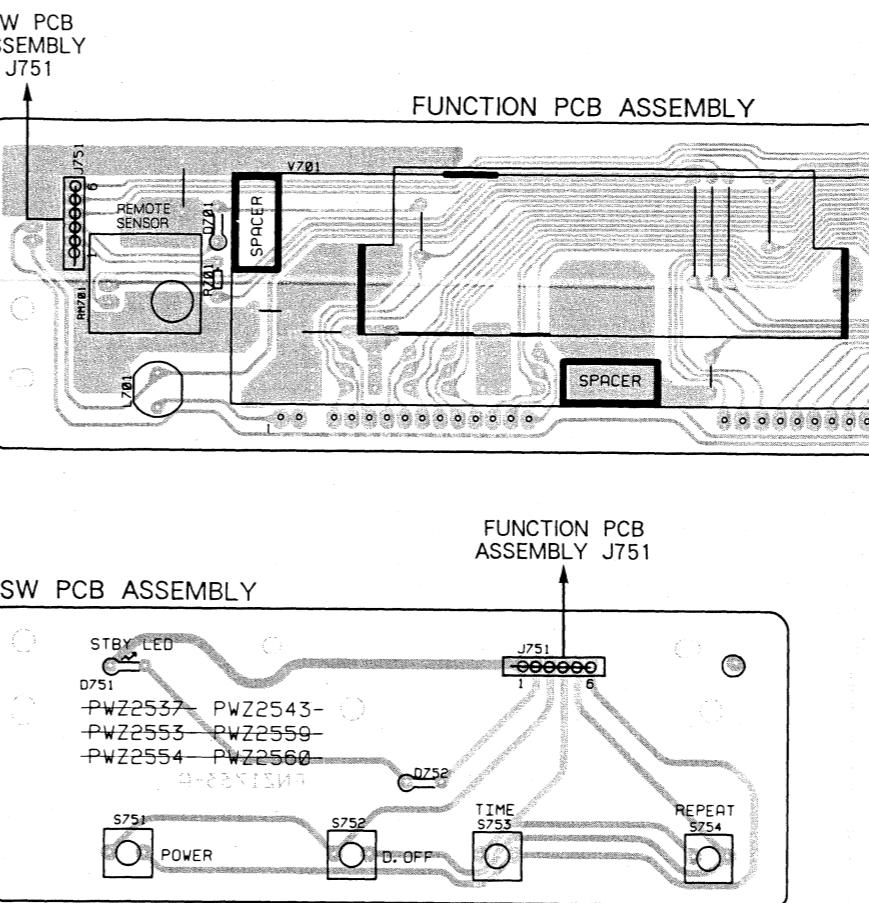
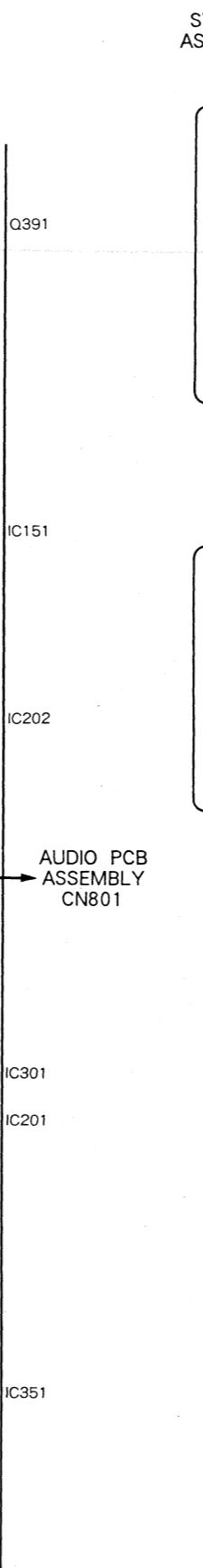
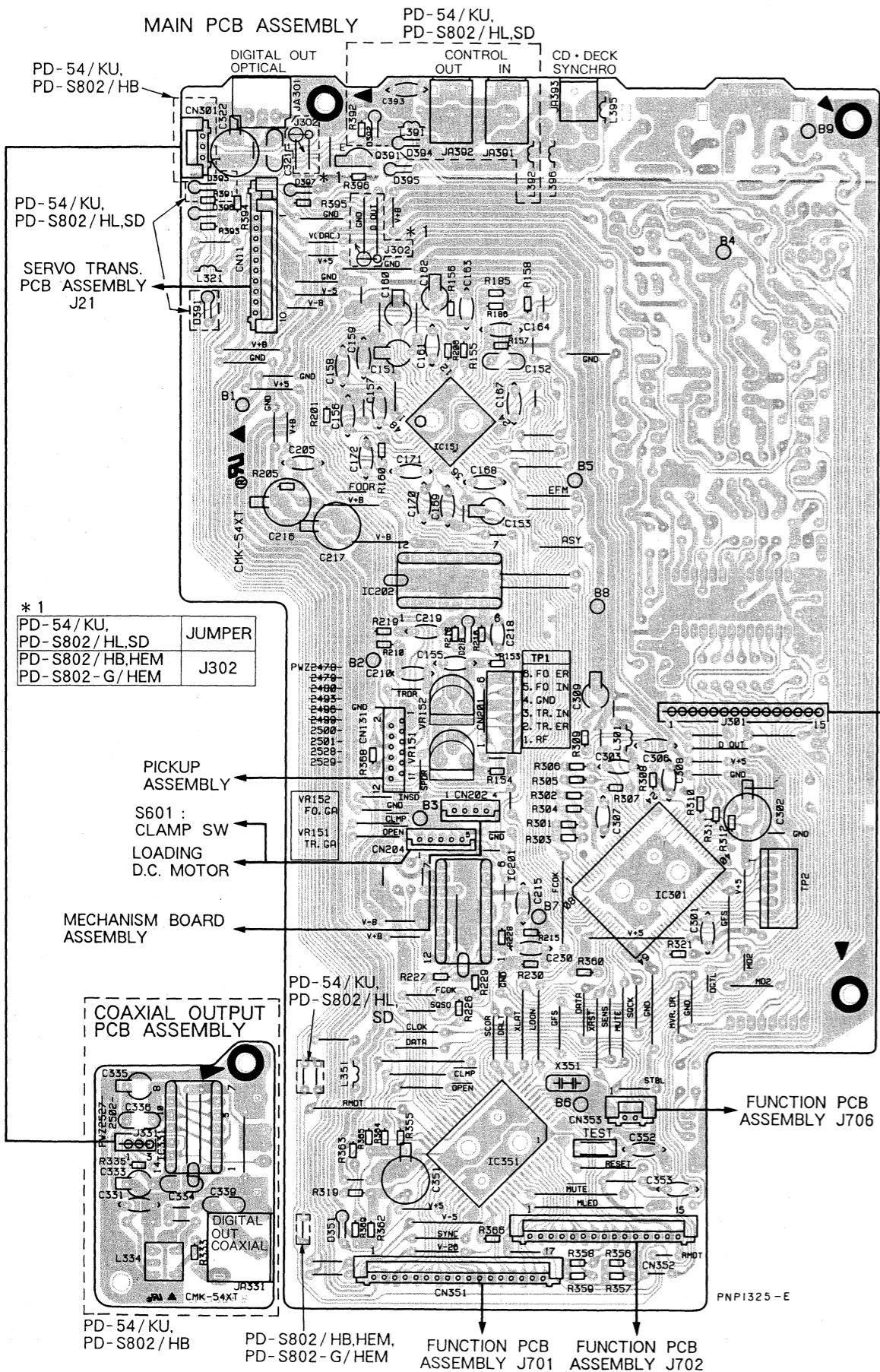
\*2 FOCUS-IN: Press the key without loading a disc.



\*3 POWER ON:Plug AC cord into AC wall socket.

\*4 POWER OFF:Unplug AC cord from AC wall socket.





This P. C. B. connection diagram is viewed from the parts mounted side.

7

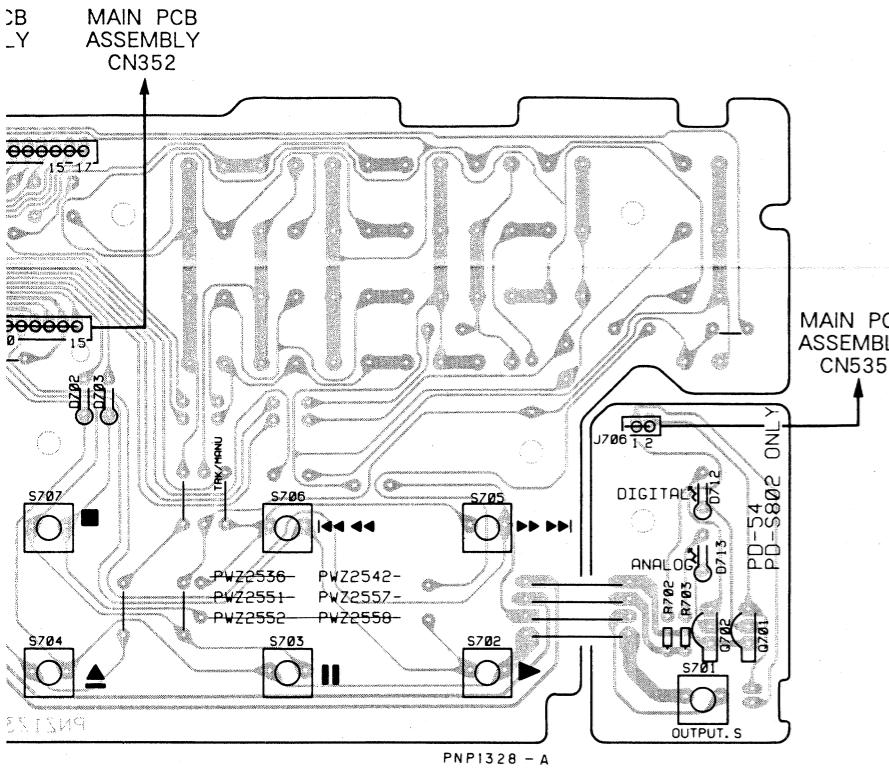
8

9

10

11

12



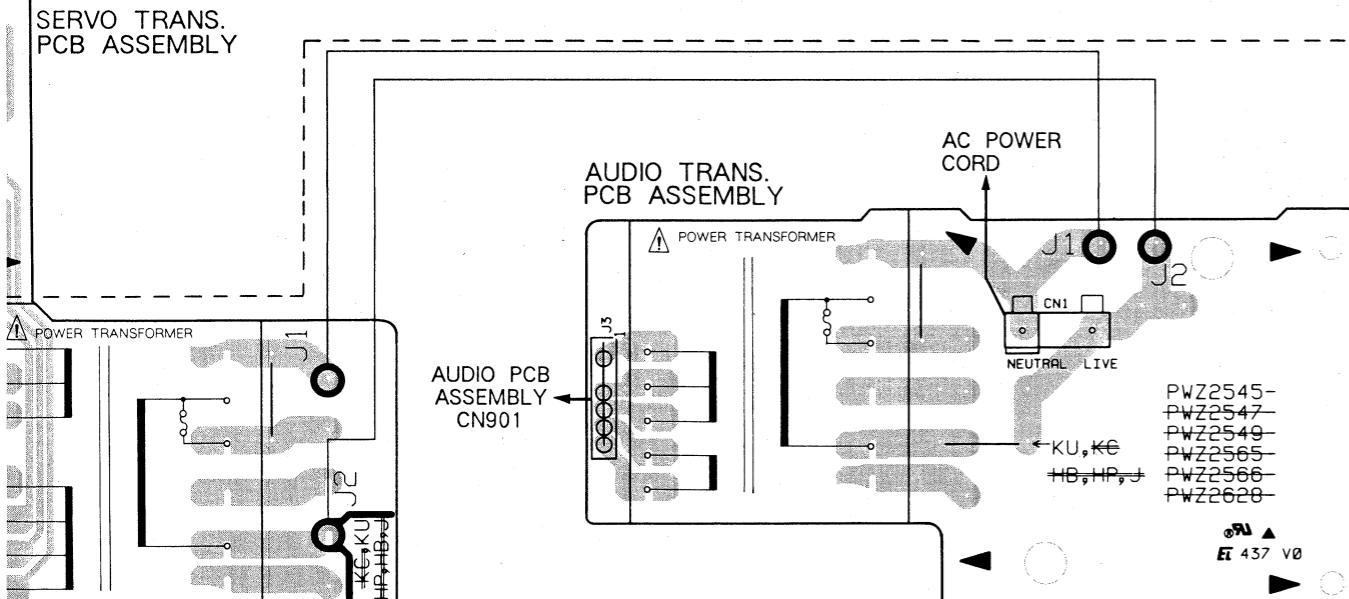
#### Line voltage selection

Line voltage can be changed as follows.  
 1. Disconnect the AC power cord.  
 2. Remove the bonnet.  
 3. Change the position of the jumper wire ④ as follows.

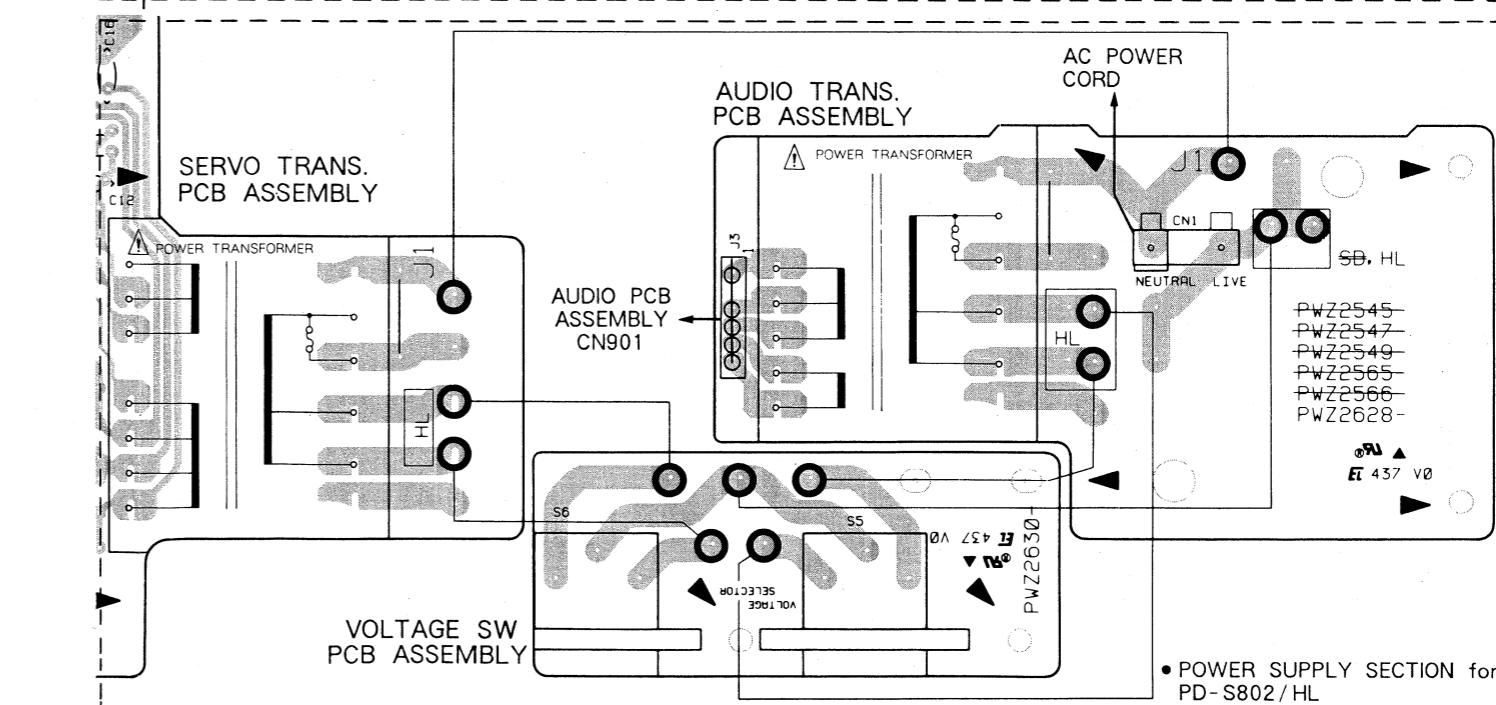
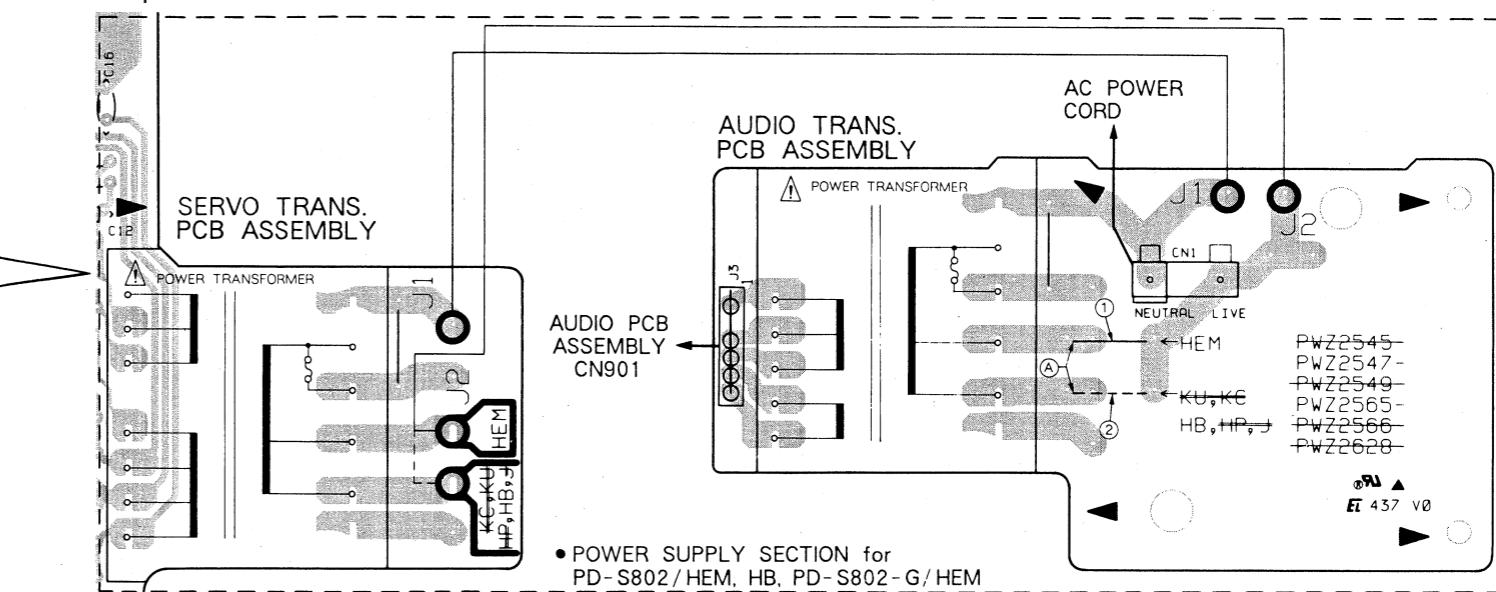
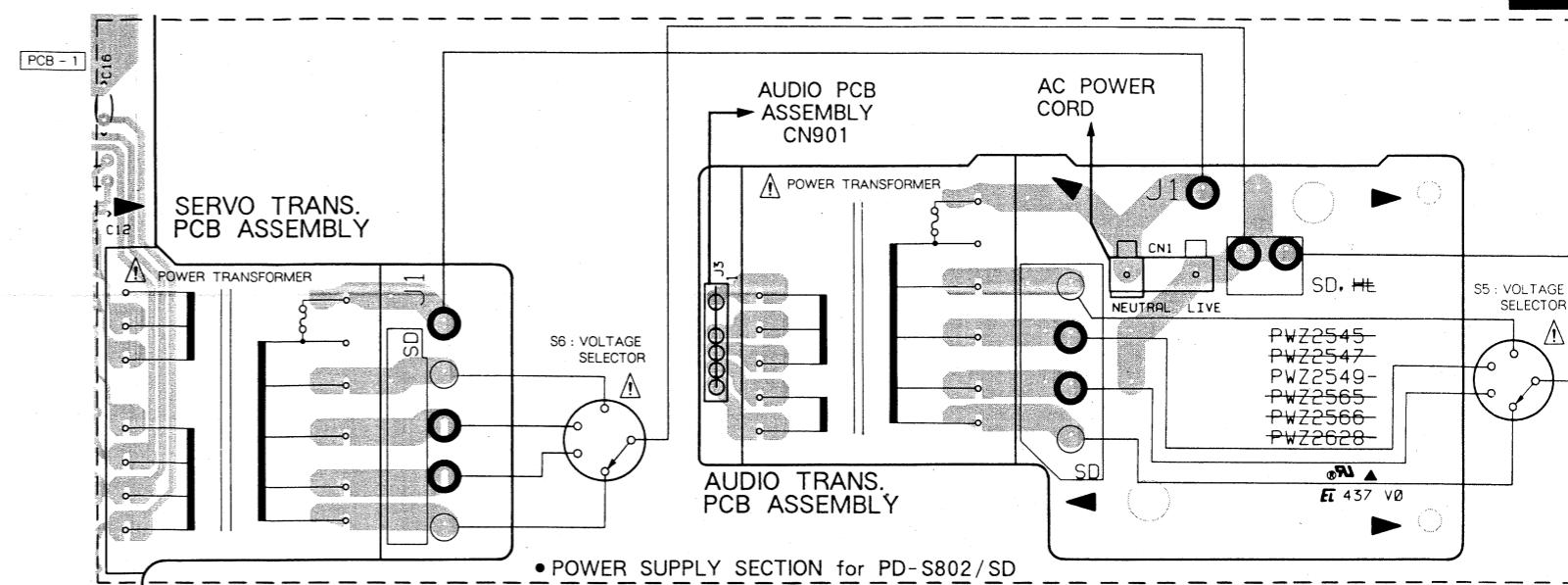
Voltage	Jumper wire ④ position
220-230V	①
230-240V	②

4. Stick the line voltage label on the rear panel.

Part No.	Description
AAX-193	220V label
AAX-192	240V label



PD-54/KU	JUMPER
PD-S802/HB,HEM,HL,SD	IC31
PD-S802-G/HEM	



7

8

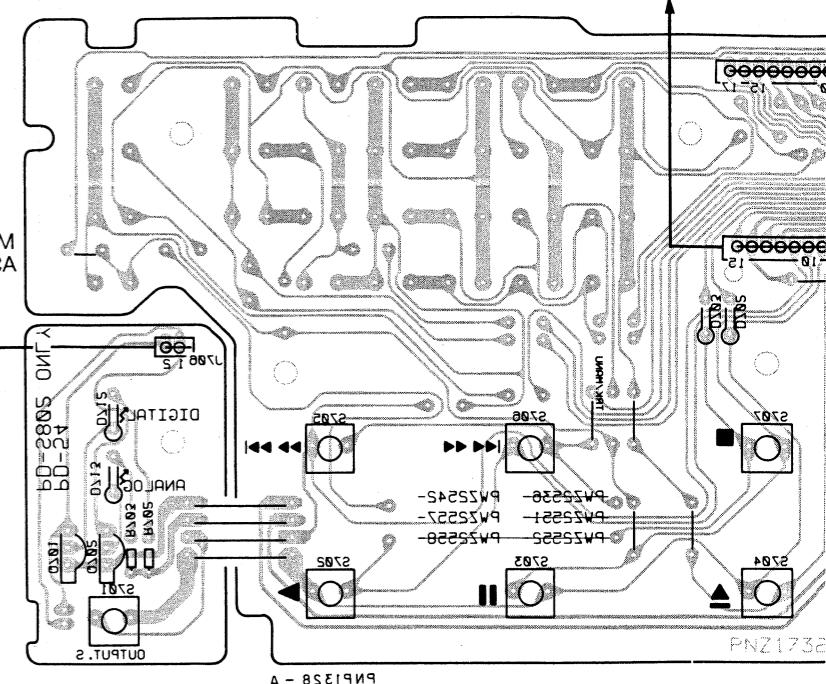
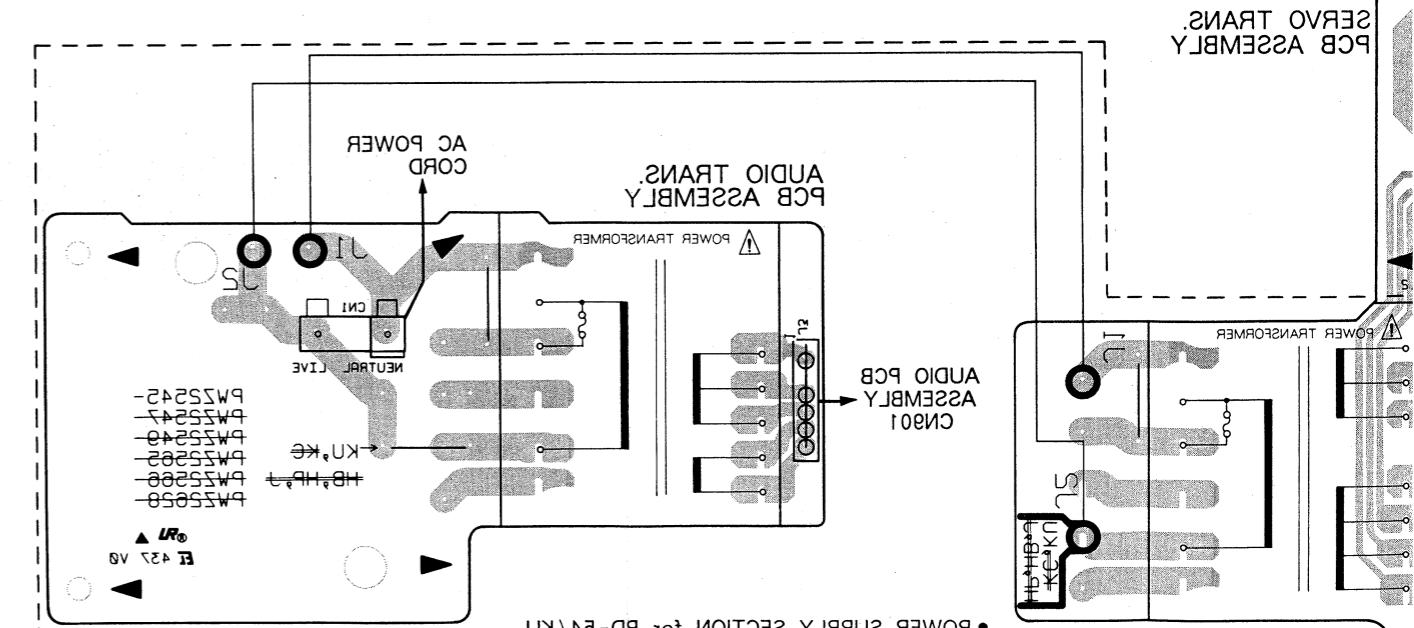
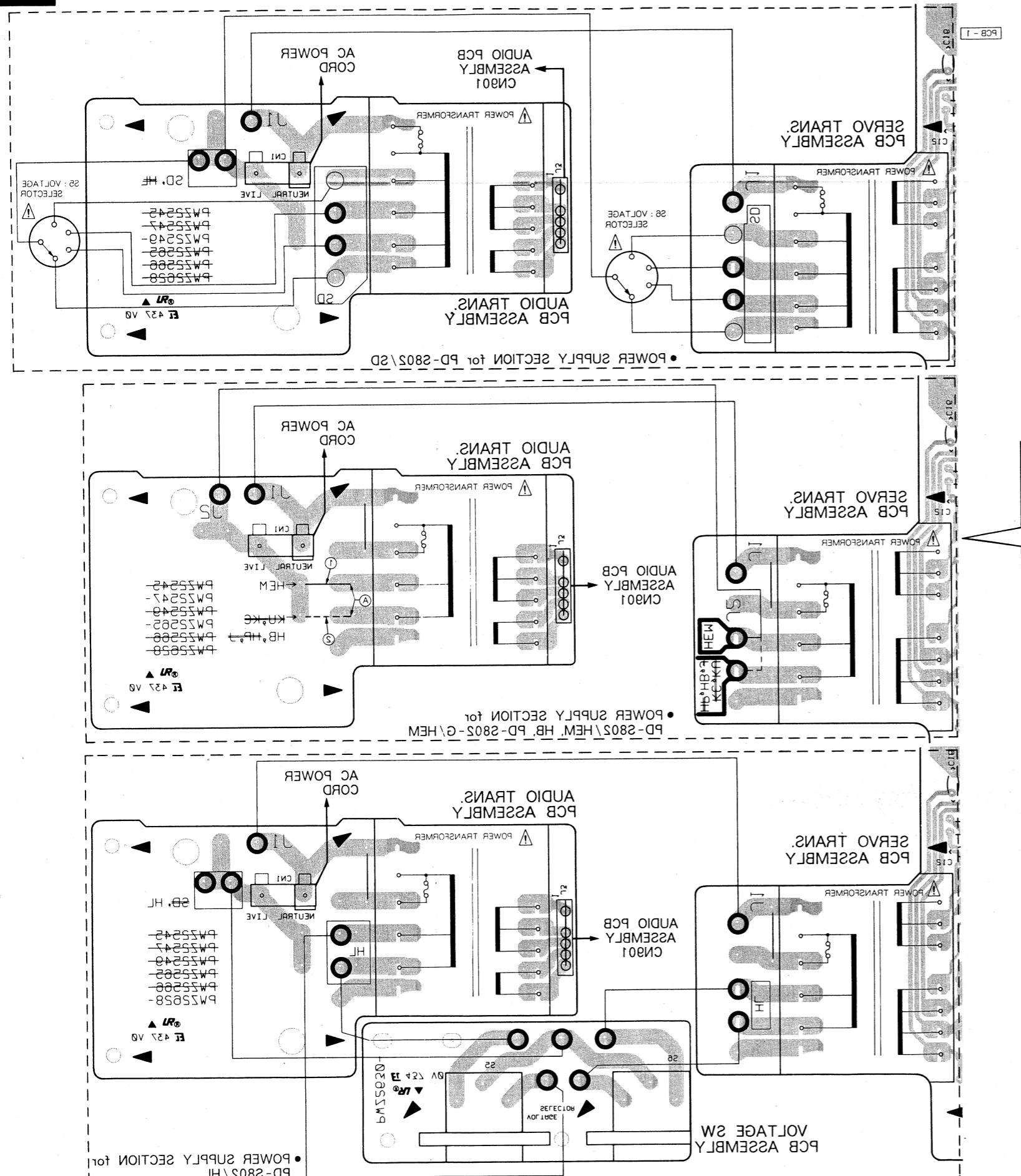
9

10

11

12

20



4. Stick the line voltage label on the least busy side.

5. Change the position of the number wire as follows.

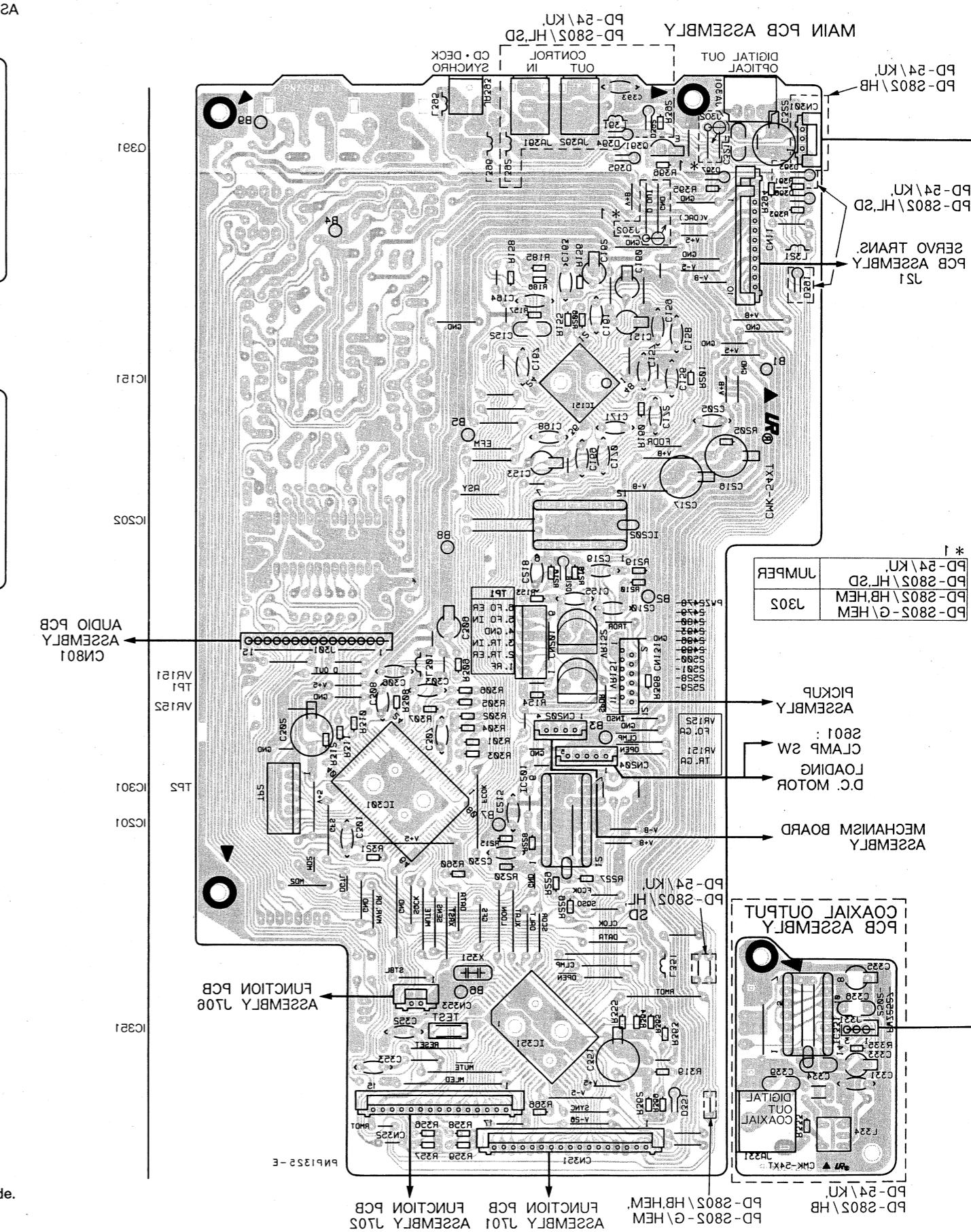
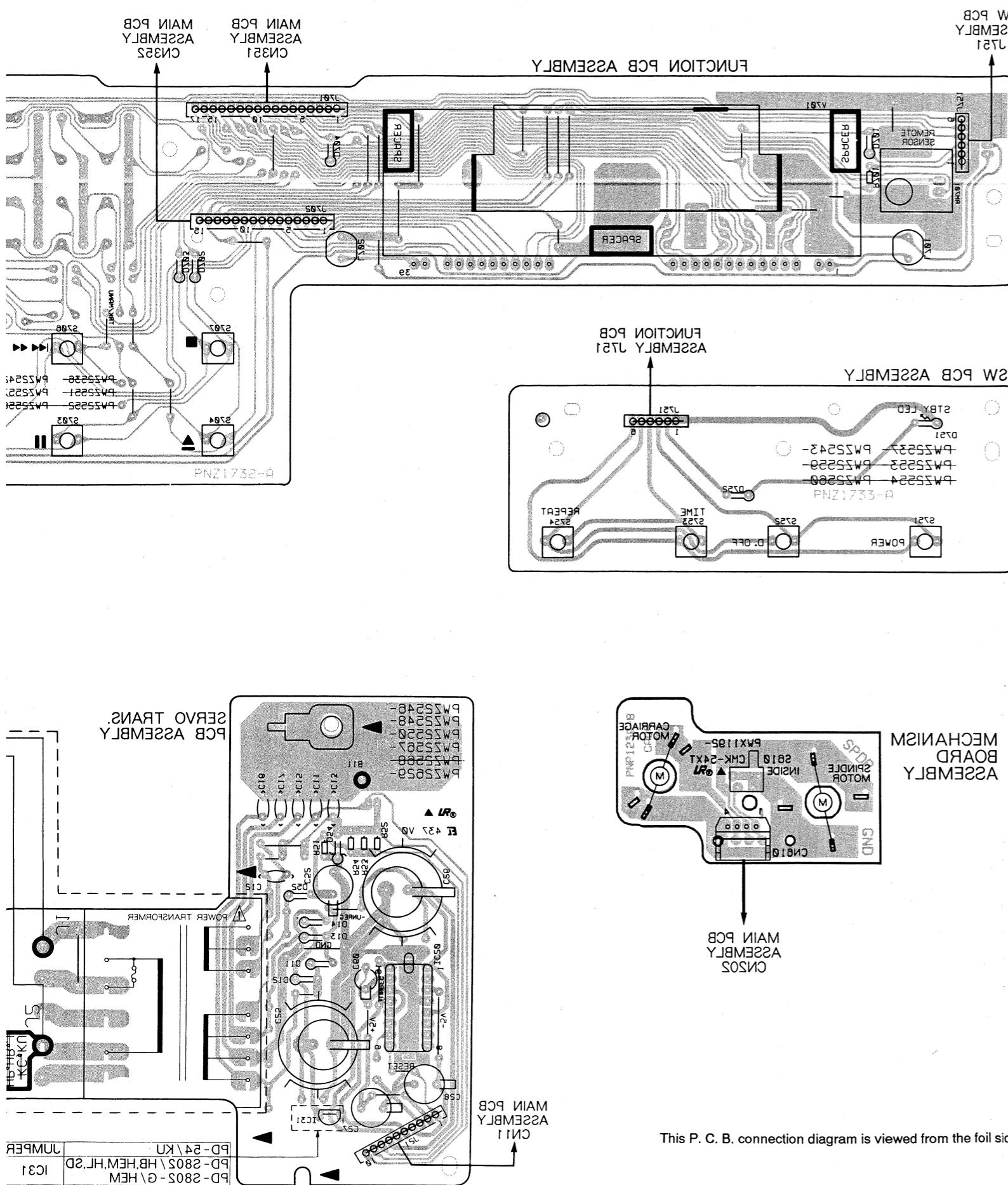
6. Remove the pointer.

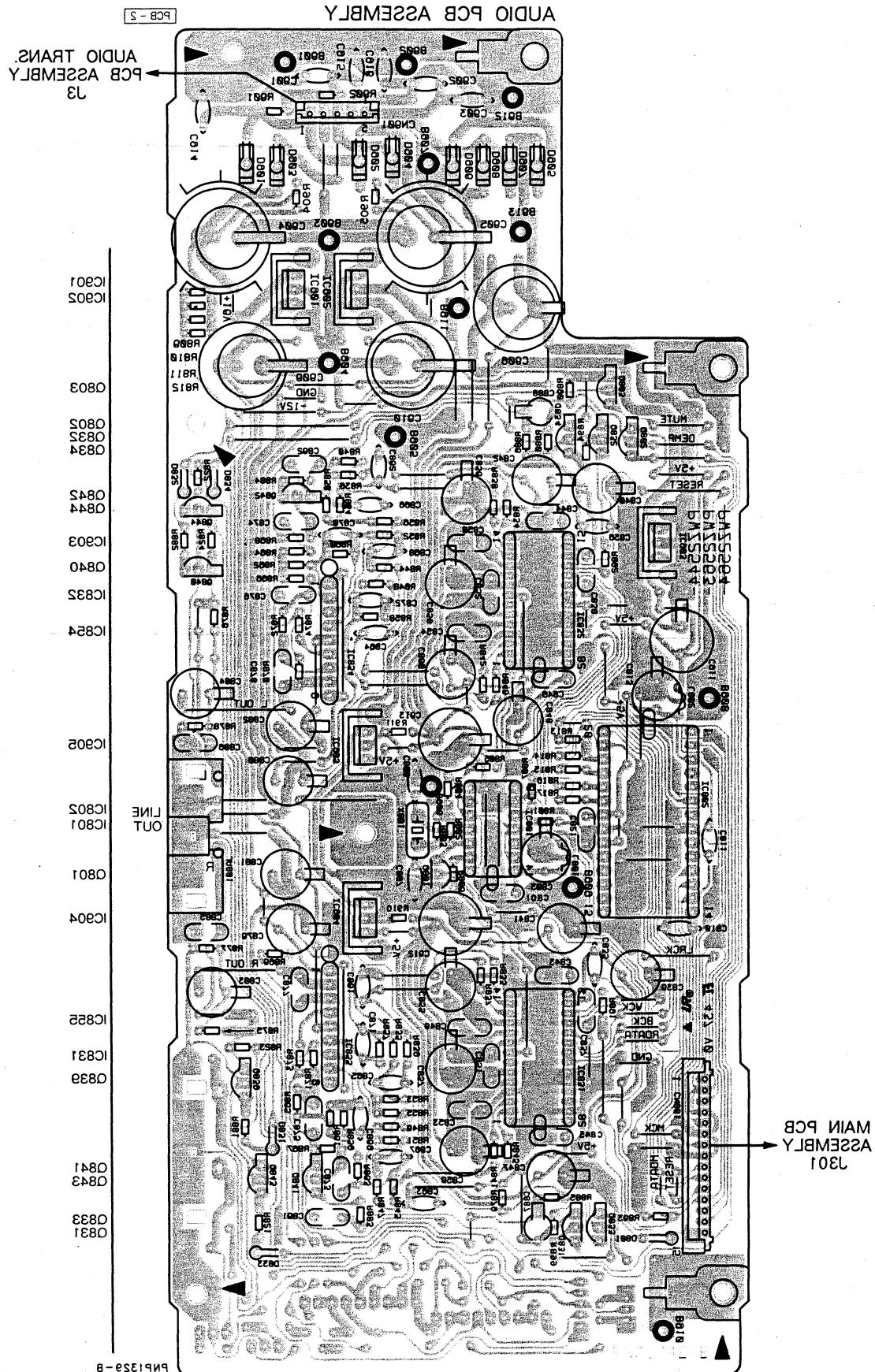
7. Disconnect the AC power cord.

8. Line voltage can be changed as follows.

9. Line voltage selection

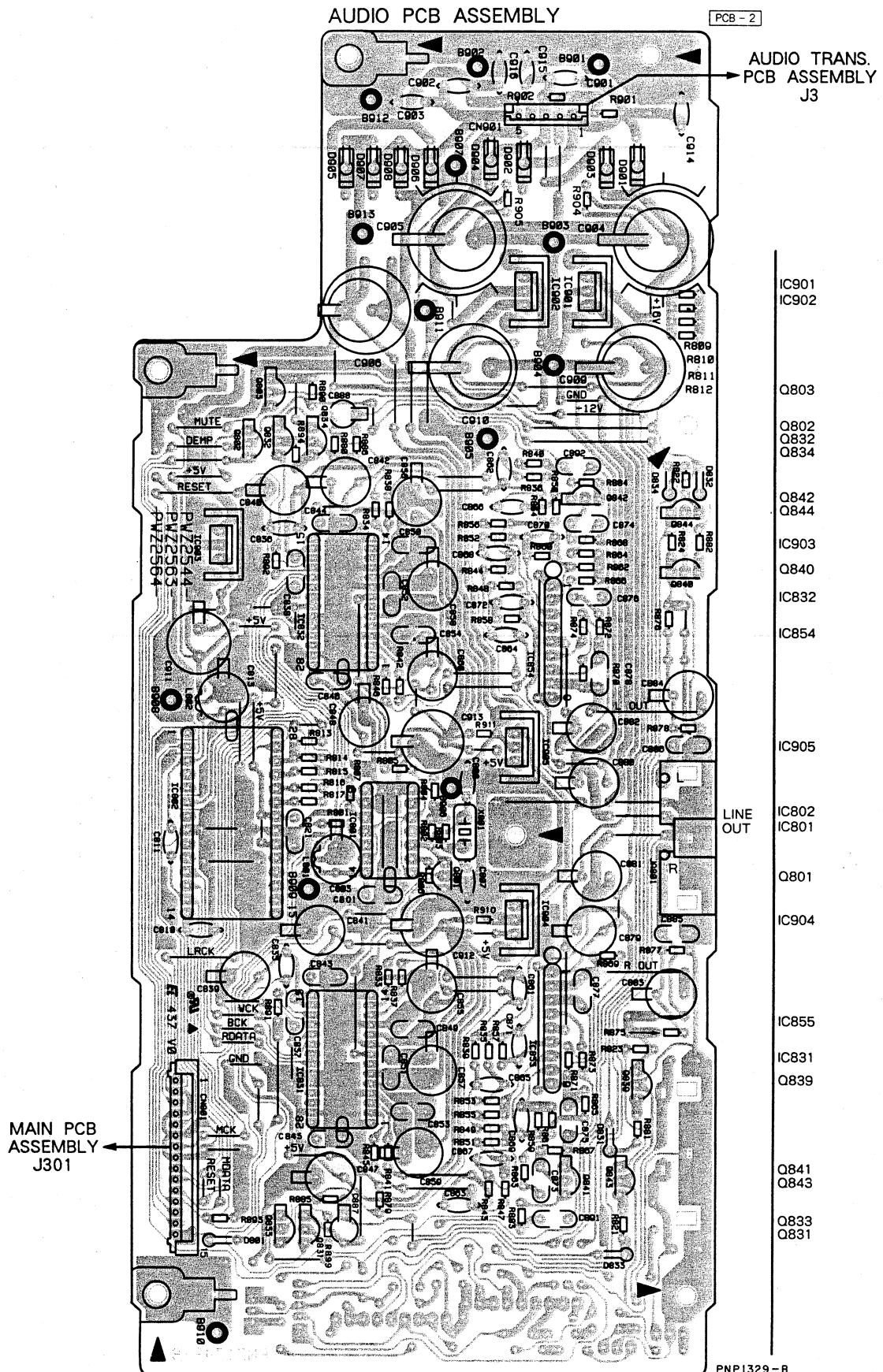
4. Stick the line outside label on the rear busbar.	
Part No.	Description
AA-X-123	250A Isol
AA-X-125	240A Isol



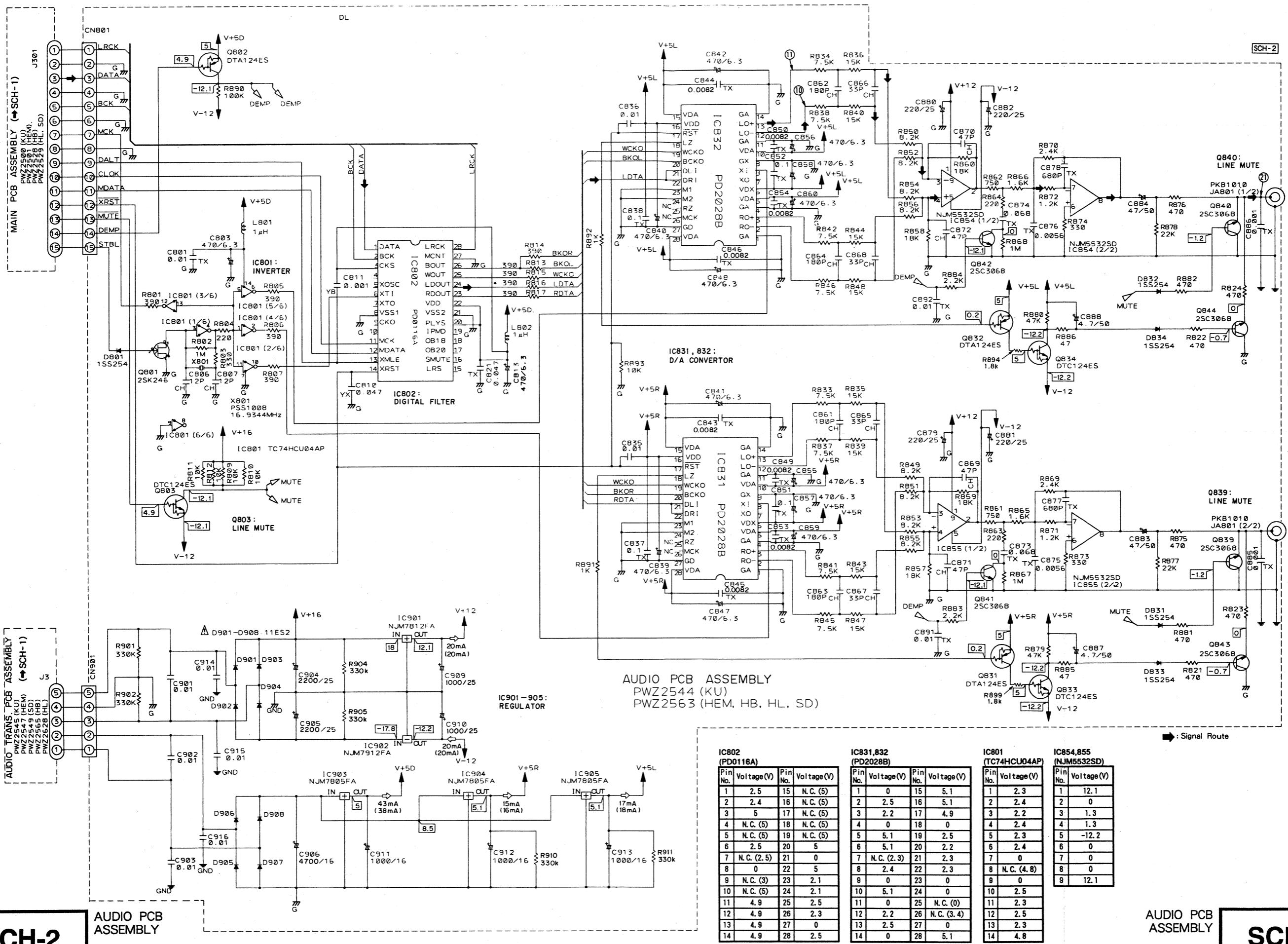


This P. C. B. connection diagram is viewed from the foil side.

## 4.2 AUDIO PCB ASSEMBLY



This P. C. B. connection diagram is viewed from the parts mounted side.



## 5. PCB PARTS LIST

## NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "●" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.
- When ordering resistors, first convert resistance values into code form as shown in the following examples.

Ex.1 When there are 2 effective digits(any digit apart from 0), such as 560 ohm and 47k ohm(tolerance is shown by J=5%, and K=10%).

560  $\Omega$   $\rightarrow$  56  $\times$  10<sup>1</sup>  $\rightarrow$  561 ..... RD1/8PM 5 6 1 J

47k  $\Omega$   $\rightarrow$  47  $\times$  10<sup>3</sup>  $\rightarrow$  473 ..... RD1/4PS 4 7 3 J

0.5  $\Omega$   $\rightarrow$  0R5 ..... RN2H 0 R 5 K

1  $\Omega$   $\rightarrow$  010 ..... RS1P 0 1 0 K

Ex.2 When there are 3 effective digits(such as in high precision metal film resistors).

5.62k  $\Omega$   $\rightarrow$  562  $\times$  10<sup>3</sup>  $\rightarrow$  5621 ..... RN1/4PC 5 6 2 1 F

### Mark No. Description Part No.

## LIST OF ASSEMBLIES

NSP	MOTHER PCB ASSEMBLY	PWM1766
	MAIN PCB ASSEMBLY	PWZ2500
	COAXIAL OUTPUT PCB ASSEMBLY	PWZ2502
NSP	ANALOG PCB ASSEMBLY	PWM1775
	AUDIO PCB ASSEMBLY	PWZ2544
	AUDIO TRANS. PCB ASSEMBLY	PWZ2545
	SERVO TRANS. PCB ASSEMBLY	PWZ2546
(NSP)	VOLTAGE SW PCB ASSEMBLY *1)	
NSP	SUB PCB ASSEMBLY	PWX1285
	FUNCTION PCB ASSEMBLY	PWZ2542
NSP	SW PCB ASSEMBLY	PWZ2543
NSP	LOADING MECHANISM ASSEMBLY TT	PXA1521
NSP	SERVO MECHANISM ASSEMBLY TT92	PXA1479
NSP	MECHANISM BOARD ASSEMBLY	PWX1192

Note\*1 : For PD-S802/HL only. Refer to P40.

## MAIN PCB ASSEMBLY

## SEMICONDUCTORS

IC151	CXA1372Q
IC301	CXD2500BQ
$\Delta$ IC201, IC202	LA6520
IC351	PD4467A
Q391	2SC1740S
D218, D351, D391-D397	1SS254

## COILS

L301, L321, L351, L391, L392, L395, L396	LAU010K
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## CAPACITORS

C151, C153	CEAS101M10
C216, C217	CEAS330M16
C302, C322, C351	CEAS471M6R3
C160, C162	CEAS4R7M50
C309	CEASR47M50
C152, C161, C321	CFTXA104J50

### Mark No. Description Part No.

## COAXIAL OUTPUT PCB ASSEMBLY

SEMICONDUCTORS	IC331	MC74HCU04N
RESISTORS	All resistors	RD1/6PM 0000J
CAPACITORS	C333	CEAS101M25
	C335	CEAS470M25
	C334	CFTXA103J50
	C336, C339	CFTXA104J50
	C331	CKCYF103Z50

### COIL

L334	PULSE TRANSFORMER	PTL1003
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### OTHERS

JA331	1P PIN JACK (DIGITAL OUT COAXIAL)	RKB1019
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### Mark No. Description Part No.

## AUDIO PCB ASSEMBLY

## SEMICONDUCTORS

IC854, IC855	NJM5532SD
IC903-IC905	NJM7805FA
IC901	NJM7812FA
IC902	NJM7912FA
IC802	PD0116A
IC831, IC832	PD2028B
IC801	TC74HCU04AP
Q839-Q844	2SC3068
Q801	2SK246
Q802, Q831, Q832	DTA124ES
Q803, Q833, Q834	DTC124ES
$\Delta$ D901-D908	11ES2
D801, D831-D834	ISS254

## RESISTORS

All resistors	RD1/6PM 000J
---------------	--------------

## CAPACITORS

C806, C807	CCCCH120J50
C861-C864	CCCCH181J50
C865-C868	CCCCH330J50
C869-C872	CCCCH470J50
C911-C913	CEAS102M16
C904, C905	CEAS222M25
C879-C882	CEAS221M25
C906	CEAS472M16
C883, C884	CEAS470M50
C909, C910	CEAS102M25
C803, C813, C839-C842, C847, C848,	CEAS471M6R3
C855-C860	CFTXA102J50
C887, C888	CFTXA103J50
C885, C886	CFTXA104J50
C801, C891, C892	CFTXA104J50
C837, C838, C851, C852	CFTXA473J50
C821	CFTXA562J50
C875, C876	CFTXA681J50
C877, C878	CFTXA683J50
C873, C874	CFTXA683J50
C843-C846, C849, C850, C853, C854	CFTXA822J50
C810	CGCYX473K25
C811	CKCYB102K50
C835, C836, C901-C903, C914-C916	CKCYF103Z50

## COILS

L801, L802	LAU010K
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## OTHERS

JA801	2P PIN JACK(LINE OUT L, R)	PKB1010
X801	CRYSTAL RESONATOR (16.9344MHz)	PSS1008

## AUDIO TRANS. PCB ASSEMBLY

## OTHERS

$\Delta$ TERMINAL	RKC-061
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### Mark No. Description Part No.

## SERVO TRANS. PCB ASSEMBLY

## SEMICONDUCTORS

$\Delta$ IC20	M5298P
$\Delta$ D11-D14, D52	11ES2
D54	MTZJ18B

## RESISTORS

All resistors	RD1/6PM 000J
---------------	--------------

## CAPACITORS

C60	CEAS101M50
C52	CEAS101M35
C27, C28	CEAS471M6R3
C25, C26	CEAS472M16
C11-C13, C15-C17	CKCYF103Z50

## FUNCTION PCB ASSEMBLY

## SEMICONDUCTORS

Q701, Q702	DTC124ES




</tbl

## 6. ADJUSTMENTS

### ● Adjustment Methods

If a disc player is adjusted incorrectly or inadequately, it may malfunction or not work at all even though there is nothing at all wrong with the pickup or the circuitry. Adjust correctly following the adjustment procedure.

### ● Adjustment Items/Verification Items and Order

If the specified values cannot be obtained or no adjustment is possible by performing the verifications or adjustments described in steps 1 – 4, the pickup block may be defective.

Step	Item	Test Point	Adjustment Location
1	Focus offset verification	TP1, Pin 6(FCS. ERR)	None
2	Tracking error balance verification	TP1, Pin 2(TRK. ERR)	None
3	Pickup radial/tangential direction tilt adjustment	TP1, Pin 1(RF)	Radial tilt adjustment screw, Tangential tilt adjustment screw
4	RF level verification	TP1, Pin 1(RF)	None
5	Focus servo loop gain adjustment	TP1, Pin 5(FCS. IN) TP1, Pin 6(FCS. ERR)	VR152(FCS. GAN)
6	Tracking servo loop gain adjustment	TP1, Pin 3(TRK. IN) TP1, Pin 2(TRK. ERR)	VR151(TRK. GAN)

### ● Abbreviation table

FCS. ERR	:Focus Error
TRK. ERR	:Tracking Error
FCS GAN	:Focus Gain
TRK GAN	:Tracking Gain
FCS. IN	:Focus In
TRK. IN	:Tracking In

### ● Measuring Instruments and Tools

1. Dual trace oscilloscope (10:1 probe)
2. Low-frequency oscillator
3. Test disc (YEDS-7)
4. Low pass filter ( 39kΩ +0.001 μF )
5. Resistor (100 kΩ )
6. Standard tools

## ● Test Point and Adjustment Variable Resistor Positions

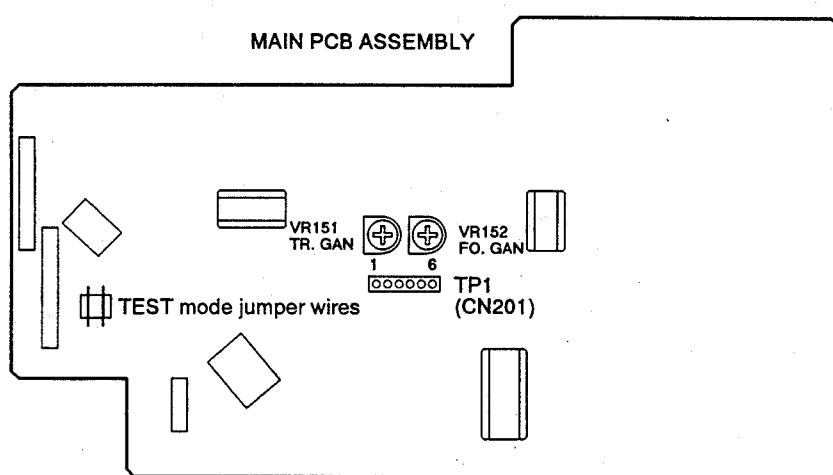


Figure 1. Adjustment Locations

## ● Notes

1. Use a 10:1 probe for the oscilloscope.
2. All the knob positions (settings) for the oscilloscope in the adjustment procedures are for when a 10:1 probe is used.

## ● Test Mode

These models have a test mode so that the adjustments and checks required for service can be carried out easily. When these models are in test mode, the keys on the front panel work differently from normal. Adjustments and checks can be carried out by operating these keys with the correct procedure. For these models, all adjustments are carried out in test mode.

### [Setting these models to test mode]

How to set this model into test mode.

1. Unplug the AC power cord from the AC socket.
2. Short the test mode jumper wires. (See Figure 1.)
3. Plug the AC power cord back into the AC socket.

When the test mode is set correctly, the display is different from what it usually is when the power is turned on. If the display is still the same as usual, test mode has not been set correctly, so repeat Steps 1 – 3.

**[Release from test mode]**

Here is the procedure for releasing the test mode:

1. Press the STOP key and stop all operations.
2. Turn off the power switch on the front panel.

**[Operations of the keys in test mode]**

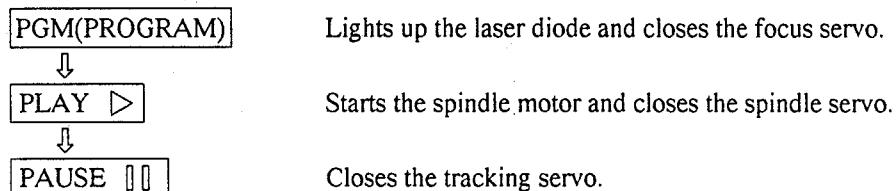
Code	Key Name	Function in Test Mode	Explanation
	PGM (PROGRAM)	Focus servo close	<p>The laser diode is lit up and the focus actuator is lifted up, then lowered slowly and the focus servo is closed at the point where the objective lens is focused on the disc. With the player in this state, if you lightly rotate the stopped disc by hand, you can hear the sound the focus servo.</p> <p>If you can hear this sound, the focus servo is operating correctly. If you press this key with no disc mounted, the laser diode lights up, the focus actuator is pulled up, then the actuator is lowered and raised three times and returned to its original position.</p>
▶	PLAY	Spindle servo ON	<p>Starts the spindle motor in the clockwise direction and when the disc rotation reaches the prescribed speed (about 500 rpm at the inner periphery), sets the spindle servo in a closed loop.</p> <p>Be careful. Pressing this key when there is no disc mounted makes the spindle motor run at the maximum speed.</p> <p>If the focus servo does not go correctly into a closed loop or the laser light shines on the mirror section at the outermost periphery of the disc, the same symptom is occurred.</p>
□	PAUSE	Tracking servo close/open	<p>Pressing this key when the focus servo and spindle servo are operating correctly in closed loops puts the tracking servo into a closed loop, displays the track number being played back and the elapsed time on the front panel, and outputs the playback signal.</p> <p>If the elapsed time is not displayed or not counted correctly or the audio is not played back correctly, it may be that the laser is shining on the section with no sound recorded at the outer edge of the disc, that something is out of adjustment, or that there is some other problem.</p> <p>This key is a toggle key and open/close the tracking servo alternately. This key has no effect if no disc is mounted.</p>

Code	Key Name	Function In Test Mode	Explanation
◀◀ ◀◀	TRACK / MANUAL SEARCH REV	Carriage reverse (inwards)	Moves the pickup position toward the inner diameter of the disc. When this key is pressed with the tracking servo in a closed loop, the tracking servo automatically goes into an open loop. Since the motor does not automatically stop at the mechanical end point in test mode, be careful with this operation.
▶▶ ▶▶	TRACK / MANUAL SEARCH FWD	Carriage forward (outwards)	Moves the pickup position toward the outer diameter of the disc. When this key is pressed with the tracking servo in a closed loop, the tracking servo automatically goes into an open loop. Since the motor does not automatically stop at the mechanical end point in test mode, be careful with this operation.
□	STOP	Stop	Initializes and the disc rotation stops. The pickup and disc remain where they are when this key is pressed.
△	OPEN/CLOSE	Disc tray open/close	Open/close the disc tray. This key is a toggle key and open/close tray alternately. Pressing this key when the disc is turning stops the disc, then opens the tray. This key operation does not affect the position of the pickup.

#### [How to play back a disc in test mode]

In test mode, since the servos operate independently, playing back a disc requires that you operate the keys in the correct order to close the servos.

Here is the key operation sequence for playing back a disc in test mode.



Wait at least 2-3 seconds between each of these operations.

## 1. Focus Offset Verification

● Objective	Verify the DC offset for the focus error amp.		
● Symptom when out of adjustment	The model does not focus in and the RF signal is dirty.		
● Measurement instrument connections	Connect the oscilloscope to TP1, Pin 6 (FCS. ERR)	● Player state	Test mode, stopped (just the Power switch on)
	[Settings] 5 mV/division 10 ms/division DC mode	● Adjustment location	None
		● Disc	None needed
<b>[Procedure]</b>			
Verify the DC voltage at TP1, Pin 6 (FCS. ERR) is $0 \pm 50$ mV.			

Note : If the specified values cannot be obtained or no adjustment is possible by performing the verifications or adjustments described in adjustment items 1 – 4, the pickup block may be defective.

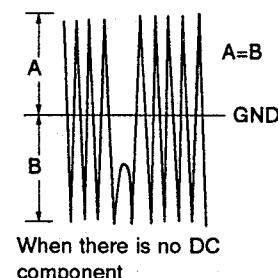
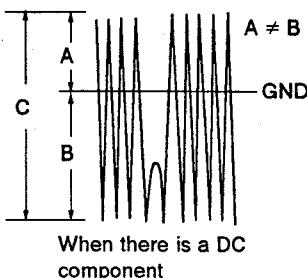
## 2. Tracking Error Balance Verification

● Objective	To verify that there is no variation in the sensitivity of the tracking photo diode.		
● Symptom when out of adjustment	Play does not start or track search is impossible.		
● Measurement instrument connections	Connect the oscilloscope to TP1, Pin 2 (TRK. ERR). This connection may be via a low pass filter.	● Player state	Test mode, focus and spindle servos closed and tracking servo open
	[Settings] 50 mV/division 5 ms/division DC mode	● Adjustment location	None
		● Disc	YEDS-7
<b>[Procedure]</b>			

1. Move the pickup to midway across the disc ( $R=35$  mm) with the TRACK/MANUAL SEARCH FWD  $\gg\gg\gg$  or REV  $\ll\ll\ll$  key.
2. Press the PGM (PROGRAM) key, then the PLAY  $\triangleright$  key in that order to close the focus servo then the spindle servo.
3. Line up the bright line (ground) at the center of the oscilloscope screen and put the oscilloscope into DC mode.
4. Supposing that the positive amplitude of the tracking error signal at TP1, pin 2 (TRK. ERR) is (A) and the negative amplitude is (B), the following expression is satisfied.

$$\text{When } A \geq B, \frac{A-B}{C} \times \frac{1}{2} \leq 0.1$$

$$\text{When } A < B, \frac{B-A}{C} \times \frac{1}{2} \leq 0.1$$



### 3. Pickup Radial/Tangential Direction Tilt Adjustment

● Objective	To adjust the angle of the pickup relative to the disc so that the laser beams are shone straight down into the disc for the best read out of the RF signals.		
● Symptom when out of adjustment	Sound broken; some discs can be played but not others.		
● Measurement instrument connections	Connect the oscilloscope to TP1, Pin 1 (RF).  [Settings] 20 mV/division 200 ns/division AC mode	● Player state  ● Adjustment location  ● Disc	Test mode, play  Pickup radial tilt adjustment screw and tangential tilt adjustment screw  YEDS-7

#### [Procedure]

1. Press the TRACK / MANUAL SEARCH FWD  $\gg\gg\gg$  or REV  $\ll\ll\ll$  key to move the pickup to halfway across the disc (R=35mm).  
Press the PGM (PROGRAM) key, the PLAY  $\triangleright$  key, then the PAUSE  $\square\square$  key in that order to close the respective servos and put the player into play mode.
2. First, adjust the radial tilt adjustment screw with a Phillips screwdriver so that the eye pattern (the diamond shape at the center of the RF signal) can be seen the most clearly.
3. Next, adjust the tangential tilt adjustment screw with a Phillips screwdriver so that the eye pattern (the diamond shape at the center of the RF signal) can be seen the most clearly (Figure 3).
4. Adjust the radial tilt adjustment screw and the tangential tilt adjustment screw again so that the eye pattern can be seen the most clearly. As necessary, adjust the two screws alternately so that the eye pattern can be seen the most clearly.
5. When the adjustment is completed, lock the radial and tangential adjustment screw.

**Note:** Radial and tangential mean the directions relative to the disc shown in Figure 2.

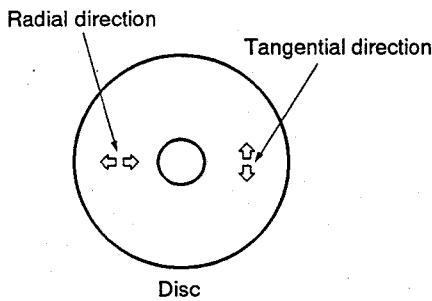
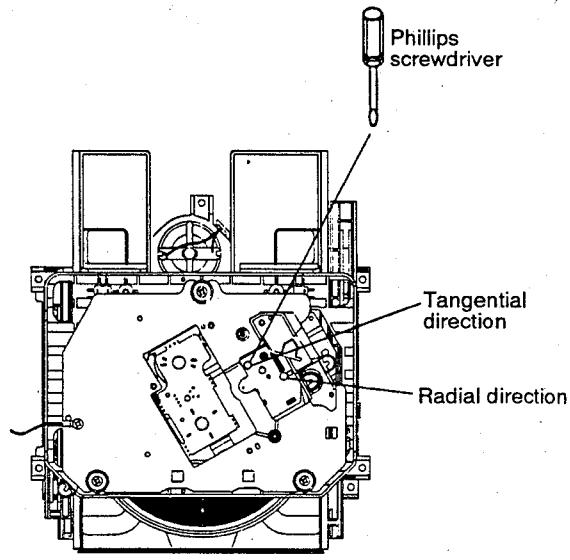


Figure 2



Adjustment locations

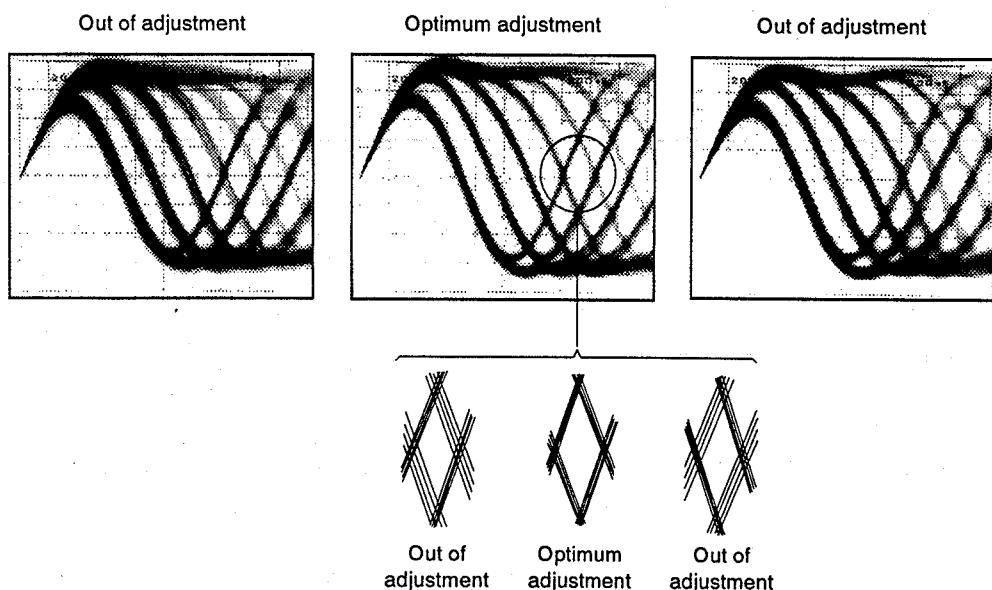


Figure 3. Eye pattern

#### 4. RF Level Verification

● Objective	To verify the playback RF signal amplitude		
● Symptom when out of adjustment	No play or no search		
● Measurement instrument connections	Connect the oscilloscope to TP1, Pin 1 (RF).  [Settings] 50 mV/division 10 ms/division AC mode	● Player state  ● Adjustment location  ● Disc	Test mode, play  None  YEDS-7
<b>[Procedure]</b>			
<ol style="list-style-type: none"> <li>1. Move the pickup to midway across the disc (<math>R=35</math> mm) with the TRACK/MANUAL SEARCH FWD <math>\gg\gg</math> or REV <math>\ll\ll</math> key, then press the PGM (PROGRAM) key, the PLAY <math>\triangleright</math> key, then the PAUSE <math>\square\square</math> key in that order to close the respective servos and put the player into play mode.</li> <li>2. Verify the RF signal amplitude is <math>1.2\text{ Vp-p} \pm 0.2\text{ V}</math>.</li> </ol>			

## 5. Focus Servo Loop Gain Adjustment

● Objective	To optimize the focus servo loop gain.		
● Symptom when out of adjustment	Playback does not start or focus actuator noisy.		
● Measurement instrument connections	See figure 4. [Settings] CH1                    CH2 20 mV/division    5 mV/division X - Y mode	● Player state ● Adjustment location ● Disc	Test mode, play VR152 (FCS. GAN) YEDS-7

### [Procedure]

1. Set the AF generator output to 1.2 kHz and 1 Vp-p.
2. Press the TRACK / MANUAL SEARCH FWD  $\gg\gg$  or REV  $\ll\ll$  key to move the pickup to halfway across the disc (R=35 mm), then press the PGM (PROGRAM) key, the PLAY  $\triangleright$  key, then the PAUSE  $\|\|$  key in that order to close the corresponding servos and put the player into play mode.
3. Adjust VR152 (FCS. GAN) so that the Lissajous waveform is symmetrical about the X axis and the Y axis.

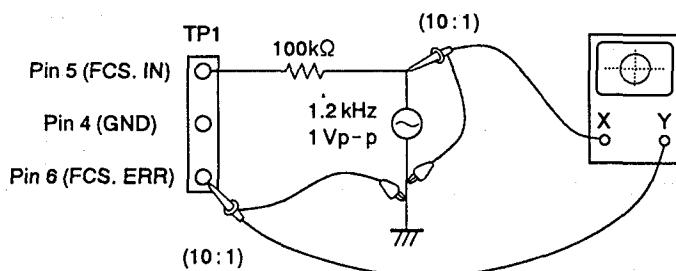
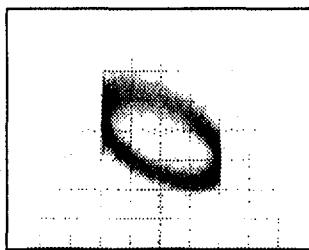
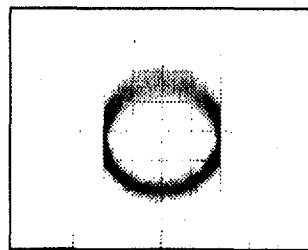


Figure 4

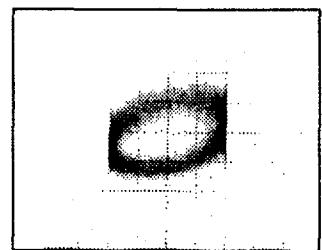
### Focus Gain Adjustment



Higher gain



Optimum gain



Lower gain

## 6. Tracking Servo Loop Gain Adjustment

● Objective	To optimize the tracking servo loop gain.								
● Symptom when out of adjustment	Playback does not start, during searches the actuator is noisy, or tracks are skipped.								
● Measurement instrument connections	<p>See Figure 5.</p> <p>[Settings]</p> <table style="margin-left: 20px;"> <tr><td>CH1</td><td>CH2</td></tr> <tr><td>50 mV/division</td><td>20 mV/division</td></tr> <tr><td>X-Y mode</td><td></td></tr> </table>	CH1	CH2	50 mV/division	20 mV/division	X-Y mode		<ul style="list-style-type: none"> <li>● Player state</li> <li>● Adjustment location</li> <li>● Disc</li> </ul>	<p>Test mode, play</p> <p>VR151 (TRK. GAN)</p> <p>YEDS-7</p>
CH1	CH2								
50 mV/division	20 mV/division								
X-Y mode									

### [Procedure]

1. Set the AF generator output to 1.2 kHz and 2 Vp-p.
2. Press the TRACK/MANUAL SEARCH FWD  $\gg\gg$  or REV  $\ll\ll$  key to move the pickup to halfway across the disc ( $R=35$  mm), then press the PGM (PROGRAM) key, the PLAY  $\triangleright$  key, then the PAUSE  $\|\|$  key in that order to close the corresponding servos and put the player into play mode.
3. Adjust VR151 (TRK. GAN) so that the Lissajous waveform is symmetrical about the X axis and the Y axis.

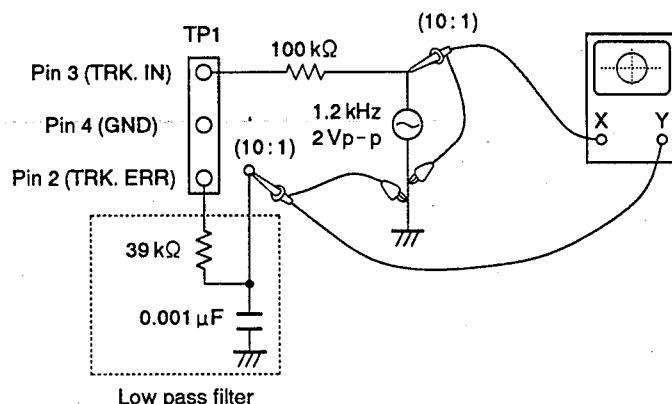
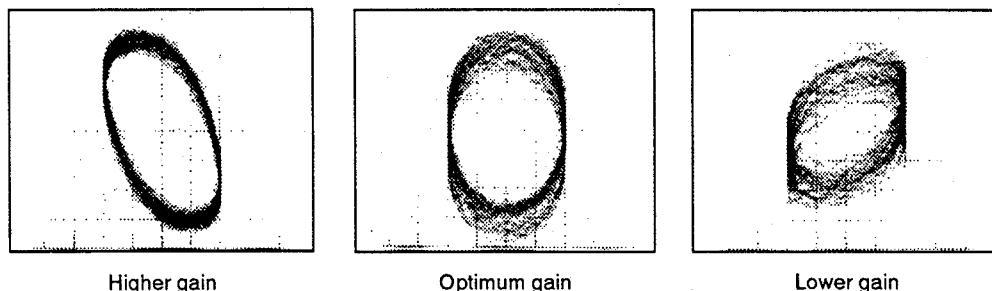


Figure 5

### Tracking Gain Adjustment



## 7. FOR PD-S802/HB, HEM, HL, SD AND PD-S802-G/HEM

### NOTES:

- Parts marked by "NSP" are generally unavailable because they are not in our Master Spare Parts List.
- The  $\Delta$  mark found on some component parts indicates the importance of the safety factor of the part. Therefore, when replacing, be sure to use parts of identical designation.
- Parts marked by "◎" are not always kept in stock. Their delivery time may be longer than usual or they may be unavailable.

### CONTRAST OF MISCELLANEOUS PARTS

PD-S802/HB, HEM, HL, SD, PD-S802-G/HEM and PD-54/KU have the same construction except for the following :

Mark	Symbol & Description	Part No.						Remarks
		PD-54 /KU	PD-S802 /HB	PD-S802 /HEM	PD-S802 /HL	PD-S802 /SD	PD-S802 -G/HEM	
NSP	MOTHER PCB assembly	PWM1766	PWM1768	PWM1767	PWM1764	PWM1764	PWM1767	
	MAIN PCB assembly	PWZ2500	PWZ2528	PWZ2501	PWZ2529	PWZ2529	PWZ2501	
	COAXIAL OUTPUT PCB assembly	PWZ2502	PWZ2502	• • • •	• • • •	• • • •	• • • •	
NSP	ANALOG PCB assembly	PWM1775	PWM1778	PWM1776	PWM1809	PWM1777	PWM1776	
	AUDIO PCB assembly	PWZ2544	PWZ2563	PWZ2563	PWZ2563	PWZ2563	PWZ2563	
	AUDIO TRANS. PCB assembly	PWZ2545	PWZ2565	PWZ2547	PWZ2628	PWZ2549	PWZ2547	
	SERVO TRANS. PCB assembly	PWZ2546	PWZ2567	PWZ2548	PWZ2629	PWZ2550	PWZ2548	
NSP	VOLTAGE SW PCB assembly	• • • •	• • • •	• • • •	PWZ2630	• • • •	• • • •	
NSP	SUB PCB assembly	PWX1285	PWX1287	PWX1287	PWX1287	PWX1287	PWX1287	
	FUNCTION PCBassembly	PWZ2542	PWZ2557	PWZ2557	PWZ2557	PWZ2557	PWZ2557	
$\Delta$	Cord stopper	CM-22C	CM-22B	CM-22B	CM-22B	CM-22B	CM-22B	
$\Delta$	AC power cord	PDG1015	• • • •	PDG1003	PDG1003	PDG1013	PDG1003	
$\Delta$	AC power cord HB	• • • •	VDG1051	• • • •	• • • •	• • • •	• • • •	Refer to P5.
$\Delta$	Fuse (FU1 : T13A)	• • • •	VEK1003	• • • •	• • • •	• • • •	• • • •	Refer to P5.
	Fuse holder	• • • •	VKR1002	• • • •	• • • •	• • • •	• • • •	Refer to P5.
$\Delta$	Power transformer (10W)(AC120V)	PTT1269	• • • •	• • • •	• • • •	• • • •	• • • •	
$\Delta$	Power transformer (11W) (AC220-230V/230-240V)	• • • •	PTT1242	PTT1242	PTT1242	PTT1242	PTT1242	
$\Delta$	Power transformer (11W) (AC110V/120-127V/220V/240V)	• • • •	• • • •	• • • •	• • • •	PTT1243	• • • •	
$\Delta$	Power transformer (8W)(AC120V)	PTT1270	• • • •	• • • •	• • • •	• • • •	• • • •	
$\Delta$	Power transformer (AC220-230V/230-240V)	• • • •	PTT1245	PTT1245	PTT1245	• • • •	PTT1245	
$\Delta$	Power transformer (AC110V/120-127V/220V/240V)	• • • •	• • • •	• • • •	• • • •	PTT1246	• • • •	
$\Delta$	Voltage selector (S5, S6) (AC110V/120-127V/220V/240V)	• • • •	• • • •	• • • •	• • • •	PSB1002	• • • •	Refer to P5.
	Output button	PAC1661	PAC1661	PAC1661	PAC1661	PAC1661	• • • •	
	Output button G	• • • •	• • • •	• • • •	• • • •	• • • •	PAC1677	
	Power button 78	PAC1743	PAC1743	PAC1743	PAC1743	PAC1743	• • • •	
	Power button 78G	• • • •	• • • •	• • • •	• • • •	• • • •	PAC1750	
	Function button 78	PAC1744	PAC1744	PAC1744	PAC1744	PAC1744	• • • •	
	Function button 78 G	• • • •	• • • •	• • • •	• • • •	• • • •	PAC1751	
	Display window	PAM1622	PAM1609	PAM1609	PAM1622	PAM1622	PAM1609	
	Front panel 54	PAN1286	• • • •	• • • •	• • • •	• • • •	• • • •	
	Front panel 8	• • • •	PAN1281	PAN1281	PAN1281	PAN1281	• • • •	
	Front panel 8G	• • • •	• • • •	• • • •	• • • •	PAN1281	PAN1289	
NSP	Opt. angle	• • • •	• • • •	• • • •	PNB1190	• • • •	• • • •	Refer to P5.
	Screw	PBA1071	• • • •	• • • •	• • • •	• • • •	• • • •	
	Side spacer	PEB1247	• • • •	• • • •	• • • •	• • • •	• • • •	
	Bonnet	PYY1148	PYY1175	PYY1175	PYY1175	PYY1175	PYY1176	
NSP	Rear base 54	PNA2015	• • • •	• • • •	• • • •	• • • •	• • • •	
NSP	Rear base B8	PNA2022	• • • •	• • • •	• • • •	• • • •	• • • •	

Mark	Symbol & Description	Part No.						Remarks
		PD-54 /KU	PD-S802 /HB	PD-S802 /HEM	PD-S802 /HL	PD-S802 /SD	PD-S802 -G/HEM	
NSP	Rear base E8	• • • •	• • • •	PNA1971	• • • •	• • • •	• • • •	
NSP	Rear base L8	• • • •	• • • •		PNA2029	• • • •	• • • •	
NSP	Rear base D8	• • • •	• • • •			PNA2024	• • • •	
NSP	Rear base E8G	• • • •	• • • •				PNA2018	
	Side sheet	PNM1226	• • • •				• • • •	
	Tray panel	PNW2280	PNW2280	PNW2280	PNW2280	PNW2280	• • • •	
	Tray panel G	• • • •	• • • •				PNW2335	
	Panel stabilizer L	PNW2281	• • • •				• • • •	
	Panel stabilizer R	PNW2306	• • • •				• • • •	
	Function panel 54	PNW2332	• • • •				• • • •	
	Function panel 8	• • • •	PNW2279	PNW2279	PNW2279	PNW2279	• • • •	
	Function panel 8G	• • • •	• • • •				PNW2336	
	Name plate	RAN1008	VAM1032	VAM1032	VAM1032	VAM1032	• • • •	
	Name plate 3182N	• • • •	• • • •				RAN1011	
	Protector F	PHA1251	PHA1243	PHA1243	PHA1243	PHA1243	PHA1243	
	Protector R	PHA1245	PHA1253	PHA1245	PHA1245	PHA1245	PHA1245	
	CD packing case 54	PHG1956	• • • •	• • • •	• • • •	• • • •	• • • •	
	CD packing case B8	• • • •	PHG1963	• • • •	PHG1963	PHG1963	• • • •	
	CD packing case E8	• • • •	• • • •	PHG1941	• • • •	• • • •	• • • •	
	CD packing case E8G	• • • •	• • • •				PHG1958	
	Remote control unit	PWW1072	PWW1072	PWW1072	PWW1072	PWW1072	PWW1075	
	Battery cover	PZN1001	PZN1001	PZN1001	PZN1001	PZN1001	PZN1011	
	Cord with mini plug	PDE-319	• • • •	• • • •	PDE-319	PDE-319	• • • •	
	Operating instructions (English)	PRB1196	PRB1196	• • • •	PRB1196	PRB1196	• • • •	
	Operating instructions (English/French/German/Italian/Dutch/ Swedish/Spanish/Portuguese)	• • • •	• • • •	PRE1183	• • • •	• • • •	PRE1183	

### MAIN PCB ASSEMBLY

PWZ2528, PWZ2501 and PWZ2500 have the same construction except for the following :

Mark	Symbol & Description	Part No.			Remarks
		PWZ2500	PWZ2528	PWZ2501	
	D391 – D394 L391,L392 C393 R391 R392	ISS254 LAU010K CKCYF103Z50 RD1/6PM244J RD1/6PM102J	• • • •	• • • •	
NSP	CN301 (3P Jumper connector) JA391,JA392(Jack CONTROL IN OUT)	52147-0310 PKN1004	52147-0310 • • • •	• • • •	

Although PWZ2500 and PWZ2529 are different in part number, they have the same service parts.

### AUDIO PCB ASSEMBLY

Although PWZ2563 and PWZ2544 are different in part number, they have the same service parts.

### AUDIO TRANS. PCB ASSEMBLY

Although PWZ2565, PWZ2547, PWZ2628, PWZ2549 and PWZ2545 are different in part number, they have the same service parts.

### **SERVO TRANS. PCB ASSEMBLY**

PWZ2567, PWZ2548, PWZ2629, PWZ2550 and PWZ2546 have the same construction except for the following :

<b>Mark</b>	<b>Symbol &amp; Description</b>	<b>Part No.</b>					<b>Remarks</b>
		<b>PWZ2546</b>	<b>PWZ2567</b>	<b>PWZ2548</b>	<b>PWZ2629</b>	<b>PWZ2550</b>	
△	IC31	• • • •	ICP-N10	ICP-N10	ICP-N10	ICP-N10	

### **FUNCTION PCB ASSEMBLY**

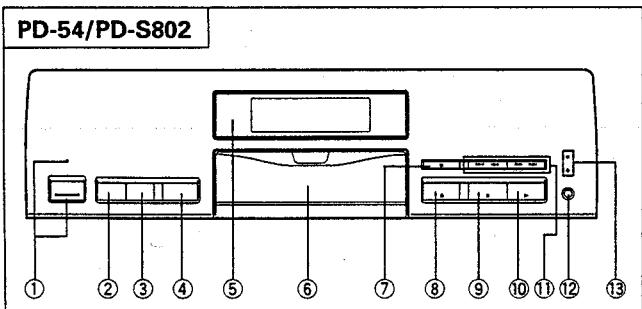
Although PWZ2557 and PWZ2542 are different in part number, they have the same service parts.

### **VOLTAGE SW PCB ASSEMBLY**

#### **Parts List**

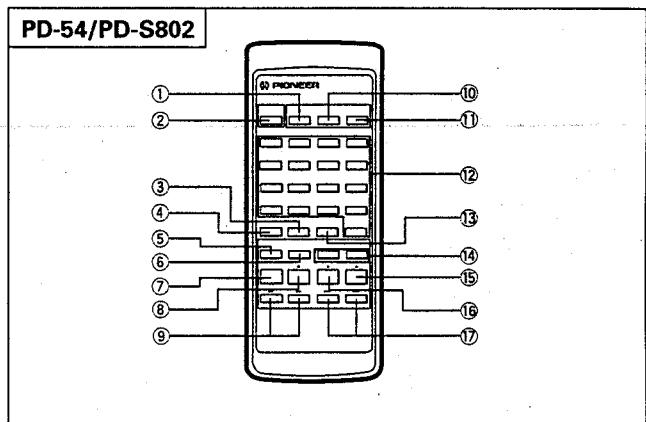
<b>Mark</b>	<b>No.</b>	<b>Description</b>	<b>Part No.</b>
<b>SWITCHES</b>			
△	S5, S6	VOLTAGE SELECTOR	PSB1006

## 8. PANEL FACILITIES



### FRONT PANEL

- ① POWER STANDBY/ON switch and STANDBY indicator
- ② DISPLAY OFF button
- ③ TIME button
- ④ REPEAT button
- ⑤ Remote sensor  
Receives the signal from the remote control unit.
- ⑥ Disc tray
- ⑦ Stop button (■)
- ⑧ OPEN/CLOSE button (△)
- ⑨ Pause button (II)
- ⑩ Play button (▶)
- ⑪ Track/Manual search buttons (◀◀◀◀/▶▶▶▶)
- ⑫ OUTPUT SELECTOR button
- ⑬ DIGITAL/ANALOG output indicators



### REMOTE CONTROL UNIT

Remote control buttons with the same names or marks as buttons on the front panel of the player control the same operations as the corresponding front panel buttons.

- ① OPEN/CLOSE button
- ② POWER button
- ③ CHECK button (PD-54/PD-S802 only)
- ④ Program button (PROGRAM/PGM)
- ⑤ COMPU/AUTO EDIT button
- ⑥ TIME FADE EDIT button
- ⑦ PEAK SEARCH button
- ⑧ STOP button (■)
- ⑨ MANUAL search buttons (◀◀ / ▶▶)
- ⑩ REPEAT button
- ⑪ RANDOM PLAY button
- ⑫ Track number/Digit buttons (1 - 16, >16)
- ⑬ CLEAR button
- ⑭ INDEX buttons (—/—)
- ⑮ PLAY button (▶)
- ⑯ PAUSE button (II)
- ⑰ TRACK search buttons (◀◀ / ▶▶)

## 9. SPECIFICATIONS

### 1. General

Type .....	Compact disc digital audio system
Power requirements	
U.S. model .....	AC 120 V, 60 Hz
U.K. and Australian models .....	AC 230 - 240 V, 50/60 Hz
Singapore model .....	AC 220 - 230 V/230 - 240 V, 50/60 Hz
Multi-voltage model .....	AC 110/120 - 127/220/240 V, 50/60 Hz
Power consumption	
PD-54/PD-S802 .....	18 W
Operating temperature .....	+5°C - +35°C +41°F - +95°F
Weight	
PD-54 .....	5.0 kg (11 lb)
PD-S802 .....	5.0 kg (11 lb)
External dimensions	
PD-54 .....	440(W) x 270(D) x 131(H) mm 17-11/32(W) x 10-5/8(D) x 5-5/32(H) in.
PD-S802 .....	420(W) x 270(D) x 131(H) mm 16-9/16(W) x 10-5/8(D) x 5-5/32(H) in.

### 2. Audio section

Frequency response .....	2 Hz - 20 kHz
S/N ratio .....	110 dB or more (EIAJ)
Dynamic range .....	98 dB or more (EIAJ)
Harmonic distortion .....	0.0021% or less (EIAJ)
Output voltage .....	2.0 V
Wow and flutter .....	Limit of measurement (±0.001% W.PEAK) or less (EIAJ)
Channels .....	2-channel (stereo)

### 3. Output terminal

Audio line output jacks (FIXED)
Control input/output jacks (PD-54 and Singapore and multi-voltage models of PD-S802 only)
Optical digital output jack
Coaxial digital output jack (PD-54 and the U.K. model of PD-S802 only)
CD-DECK SYNCHRO jack

### 4. Functions

Basic operation buttons
● PLAY, PAUSE, STOP

#### Search function

- Direct play
- Track search
- Manual search
- Index search

#### Programming

- Maximum 24 steps
- Pause
- Program check/correction
- Program clear (single track or all tracks)

#### Repeat functions

- 1 track repeat
- All tracks repeat
- Program play repeat
- Random play repeat

#### Switching display

Time consumed, remaining time (track/disc), and total time

#### Display off function

#### Timer start

#### Peak search

#### Compu/Auto program editing

Selects the tracks within the specified time.

#### Time fade editing

### 5. Accessories

● Remote control unit .....	1
● Size AAA/R03 dry cell batteries .....	2
● Control cable (PD-54 and Singapore and multi-voltage models of PD-S802 only) .....	1
● Output cable .....	1
● Operating instructions .....	1

#### NOTE:

Specifications and design subject to possible modification without notice, due to improvements.